

Thursday, December 9, 1982

Logica aims for more takeovers

by John Kavanagh
UK software company Logica is planning further takeovers in the US following an acquisition which has tripled the company's size there. Meanwhile in the UK Logica is benefiting from its split with the government's Nexos office systems firm, with a tripling of shipments of the 2200 word processor, previously sold by Nexos.

These developments emerged last week as Logica announced 30% growth in revenues to £33.3 million for its 1981-82 financial year.

Pre-tax profit was up 10% to £2.25 million. And the company has gone into its new year with a record backlog of orders, following a 50% increase in sales to £42.3 million.

It was a year ago that Logica

merged its US operation with Freyburg Systems Associates, a US company specialising in banking systems. Logica took 75% of the new Logica Inc. Both partners had 50 staff but that total has risen to over 150.

Logica chairman Philip Hughes said this increase in staff numbers reflected the company's business growth, which reached £5 million. Hughes said the US operation would account for an even bigger part of the group business this year.

He added, "We are considering another couple of acquisitions overseas, especially in the US." Hughes said Logica's involvement in banking in the US - two-thirds of its business is in this area - was seeing it through a "very tough" time for many companies in the US. One benefit of the re-

cession was that there were many programmers on the market, so Logica was able to pick quality people.

In the UK, the death of Nexos had seen the marketing of the 2200 word processor pass to ICL and Logica, which builds the machine. Hughes said ICL was the main customer for the 2200 but the product was also doing well through the "very good" dealer network which Nexos had set up in five European countries, South Africa and Hong Kong. "We're shipping three times as many as a year ago," he said. "We shipped 250 last month."

The 2200 will also be boosted by the launch of a 16-bit personal computer based on the product. Logica is setting up a dealer chain for the microcomputer. The machine runs both the CP/M-86

and MS-DOS operating systems. About 40% of Logica's business was done overseas last year. The Benelux countries accounted for 10.5% of the revenues. Orders here included a contract to provide a control system for the entire national gas grid in the Netherlands. In Sweden, Logica grew by 35% and in Australia the company opened two new offices. Hughes said Logica was especially strong in the central government market in Australia. "We do more work for central government there than in the UK," he said.



HUGHES... Logica's growth has reached £5 million.

Plessey backs 'high tech park'

by George Black
PLESSEY Telecommunications is to back a new high technology park for Liverpool on the site of its strike-ridden Edge Lane factory. The park is to open in a year's time funded by a mixture of private and public enterprise on a 60-acre site around the factory.

The scheme is to be run by Environment Secretary Michael Heseltine's Merseyside task force. The Plessey Technology Park will be on land under public ownership, with money coming from Merseyside and Liverpool local authorities.

The land at present consists of an old Plessey building which is to be demolished and a large derelict British Rail site. Plessey site facilities executive Derek Fell said, "The idea is that we shall be able to get supplies of electronics parts locally for our System X project and at the same time provide employment."

TEXAS 745
DISKETTES 5 1/4 8
The ultimate media choice from Comart
Little End Road, Eton, Bucks, SL5 8NS, UK
Tel: (0485) 218005 Telex: 3284 COMART G
A member of the Comart group of companies

MBS Rentals
Windsor (07535) 55211

DP salaries lag behind inflation

DATA processing salaries in the South and South-east have failed to keep pace with inflation over the past year, according to a survey by Lock Management Personnel. Operators did worst, with a fall of 4.1%, and DP managers best with a rise of 6%, making an overall picture of a 1/2% drop in earnings for the DP sector. The survey covered 50 manufacturing companies.

UK centre shut

UK HOTEL charges have forced the US computer-aided design systems manufacturer Calcomp to close its European training centre in Newbury, Berkshire, with the loss of seven of the 10 jobs. The company says it is cheaper to fly people to its US training centre and put them up in local hotels than to have them stay in UK hotels.

Professor of IT

A CHAIR of information technology at the University of Surrey is to be sponsored by Racal Electronics and the Industry Department. An initial fund of over £250,000 has been set up to pay the professor's salary for the first seven years.



Newell

CBI choice

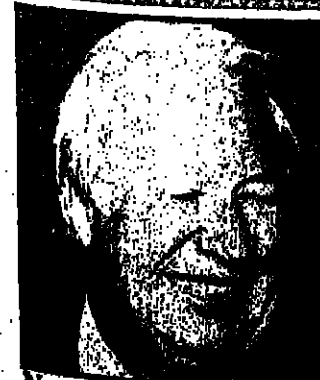
THE Confederation of British Industry has appointed F International managing director Alison Newell to serve on its central council. She was elected vice-president of the Computing Services Association earlier this year.

Ansi to adopt Ada

ADA will become the fifth language to be formally adopted by Ansi, the American National Standards Institute, early in 1983.

Happy Christmas

TODAY'S paper is our last until the New Year. It combines the issues of December 16 and 23, with no publication on December 30. We wish all of our readers a happy Christmas and a prosperous New Year. We will be back on January 6, 1983.



News service to go live in January..... 2

ICL asks users to save Dilis

by John Kavanagh

LOCAL government users have been called on by ICL to help in a new bid to get its troubled Dilis direct labour organisations system to work.

Over a year after it was nominated as a "chosen supplier" by the Chartered Institute of Public Finance and Accountancy, ICL admits it will be late next year before the system can get Cipa's seal of approval.

Pressure from users grew last month when ICL failed for the second time to get Cipa approval, and now Cipa itself is helping out by offering its own documentation to ICL and its users.

After a meeting of the new Dilis user group, ICL said this week: "It has been recognised that future development should be in close co-operation with user sites. A strong user group will provide detailed directions on improvements for future releases."

Lancashire County Council is the first user site to be picked for co-operation. Frank Bazendale, the assistant treasurer, is chairman of the Dilis user group. He has already said there would be "all hell to pay" if ICL did not get Dilis working.

ICL and Lancashire will be working on a new release of Dilis, due to be released in April. But

ICL says that will not be the final release. Another version later in 1983 is expected to be the one which will meet Cipa's specification and get ICL its "preferred supplier" tag.

Users welcomed ICL's statement cautiously this week. "The system doesn't do all ICL said it would but we're making progress," said Douglas Moulton, treasurer at Carlisle City Council.

"ICL's new approach will be a better way forward and gives us hope for the future."

Moulton and others said one of the problems had been insufficient implementation support from ICL. This had led to data being entered wrongly. "We're now working on unscrambling eight months' work," he said. "Our biggest problem recently has been rebuilding staff confidence."

Carlisle is negotiating with ICL over the charges for additional support provided by the company.

ICL has 101 Dilis customers. These orders amount to over £1.4 million in software alone. The other preferred supplier, CMC, got the Cipa seal of approval early this year. Other computer suppliers have developed systems without hope of a seal of approval and say they have been hit by Cipa singling out ICL and CMC.



TRICKETT... "I think the 20 staff who have resigned will be enticed back."

Prime buys Compeda

by Andrew Thomas
US MINI-MAKER Prime on Tuesday bought Compeda, the publicly backed systems house, for £1 million, down. The sale followed months of uncertainty for the UK computer aided design and manufacturing systems firm.

The deal gives Prime the worldwide marketing rights to Compeda's stable of software, including the best selling plant design management system PDMS. Compeda is to keep its name as a Prime subsidiary with all its staff.

Keith Trickett, Compeda managing director said: "I think that the 20 staff who have resigned will be enticed back."

But the ownership of PDMS will stay in British hands at the Cambridge CADcentre, another British Technology Group-backed company.

BTG would not give the full details of the multi-million price for

Compeda, which involves the down payment and further payments in royalties to the CAD centre, itself on course to be sold off early next year.

A BTG spokesman said: "The agreement with Prime is the one which satisfied all parties involved. It was not the easiest to pull through but the company and the taxpayer will benefit."

Prime is also discussing the question of UK and European marketing rights to PDMS with Quest Automation, one of the companies involved in the abortive attempt to form a UK "super" CAD/CAM company in October.

The Compeda saga began 18 months ago when the BTG announced that the Stevenage-based company was to be sold. Nothing was achieved, and following the collapse of talks with Racal Redac and Quest two months ago, Com-

peda's 170 UK and overseas staff were put on three months' notice.

In November, Trickett accused the Department of Industry of changing the ground rules for a sale. Trickett maintained that, at the outset, it was stated that no objection would be made to the sale of Compeda to a foreign company provided no UK interests were threatened. But following an offer from US CAD giant Computervision, rumoured to be five times larger than the eventual sale price, the rug was pulled out from under their feet by a High Court writ from Nottingham-based Isopipe.

Isopipe was involved in the early design stages of the PDMS system, and wanted PDMS kept under British control. But the end result of the legal move was to cause Computervision's deadline to be missed.

Commodore plans to manufacture in UK

by John Kavanagh

THE UK has been chosen by one of the world's leading microcomputer companies, Commodore International, as its third main manufacturing centre. The manufacturing decision was revealed last week as Commodore announced 63% worldwide growth in its last financial year, took the first UK deliveries of its 16-bit 720 microcomputer and spoke of plans to launch in spring a games machine costing less than £100.

The UK is Commodore's biggest market outside the US, accounting for a quarter of its sales. It claims to be the leading microcomputer supplier in the UK, apart from the UK firm Sinclair Research. At present products for the UK are made in West Germany, the other main non-US manufacturing company, where Commodore employs 190 people in its factory.

"We are still looking for the right site but we will definitely introduce UK manufacture next year," said UK marketing manager John Baxter. "Because we deal with high technology products there will not be a large number of jobs. We will start as we did in Germany, building one product. But we will buy a big site and grow into it. In Germany we now make seven products."

The hard-bit North-east, where Commodore made calculators and digital watches in its earlier days, is not a candidate for the factory this time. Baxter said the company wanted a more central site further South.

Baxter said the new factory was needed because of growth in Europe, although Commodore also hopes UK manufacture will make its products more acceptable to government purchasing agencies.

"We have always been annoyed that the government's micro-schools scheme listed only UK firms as preferred suppliers," Baxter said. "All the same we have held our own in that market. And the secondary school scheme, the biggest market, is now coming to an end anyway."

Commodore's 16-bit 720 business system is now in the UK. The machine, launched in April, has up to eight Mbytes of memory. The 500, aimed at the scientific market with its high resolution colour graphics, will be available in January. Soon afterwards Commodore plans to launch the Max games machine, already available in the US.

And the Commodore 64, a business and home computer selling at £350, will also be coming next year.

LINE NOISE

IT'S an ideal time to start a bank, according to Mike Aldrich of Rediffusion Computers. If the base rate falls below 8%, two out of four clearing banks will start to lose heavily because of the loading of their structure with high-street properties. Meanwhile small new banks will be able to offer financial services quickly and efficiently via Prestel and the new interactive cable television networks with tiny overheads. A similar thing is happening in the US, but there the big boys are making the running. The small and medium-sized banks have already lost many of their most profitable customers to Merrill Lynch, American Express and Chemical Bank which are offering remote banking facilities to personal computer users.

Citibank, Chase Manhattan and Bankamerica are expected to offer similar services.

THINGS may be picking up for more than one company in the workstation business, it seems. Our man at the high-end interface knows that Kean Computers could be about to launch an ICL type of high-powered graphics machine for use in the CAD/CAM field. It's going to run under the one-stop popular Unix operating system, version 7 at first, then under Berkeley University's 4.2 version. We'll be keen to learn how competitively it will be priced.

Computer fraud woman jailed

DETECTIVE-constable Colin Couve, a member of Scotland Yard's newly-formed Computer Fraud Squad, was praised by an Old Bailey judge last Thursday for a "brilliant piece of detective work" in solving Britain's first computer fraud to reach the Central Criminal Court.

Mrs Sylvia Richards, 55, former head of the Payments Department for the London borough of Merton, was jailed for 12 months after being found guilty of conspiracy to defraud her employer.

She instructed the computer at Wimbledon Town Hall to send three cheques totalling £13,956 to her son Robin Brayshaw, 29, who

had opened a bogus bank account in a false name.

Brayshaw, of Moffat Road, Thornton Heath, her son by a former marriage, had admitted the conspiracy to defraud the town hall. He was also jailed for 12 months.

Judge John Hazan said because it was the first computer fraud to be heard at the Old Bailey, he wanted to make it clear to anyone else who might be tempted that an immediate custodial sentence would follow.

He told Richards, of Shirley, Surrey, "You grossly betrayed your position of trust. As a result innocent people were put under

suspicion in your department. The money you used was ratepayers' and taxpayers' money."

"This was a carefully thought out fraud which needed considerable skill and ingenuity. It was also a very difficult fraud to detect because you had taken every step to cover your tracks."

The judge ordered her to pay the council £2,107 compensation. Some £6,788 was recovered and £7,169 was still outstanding, the court heard.

Robert Watson, prosecuting, said the scheming Richards fed "inputs" into the computer to erase all trace of the money paid out.

BT/ICL Merlin link-up

by Andrew Thomas
BRITISH Telecom has renamed one of its divisions and taken on ICL as a partner to meet private competition in the business market.

The newly dubbed Merlin is Telecom's old £500 million a year business products and services sector. It will handle equipment from all Telecom's traditional suppliers such as GEC, Plessey, Mitel, Philips, STC and is to take on three new and as yet unnamed products from ICL.

A Telecom spokesman described Merlin's role as being the identification of customer needs, the development and procurement of equipment and its sale to the

telephone areas of British Telecom.

He added that Telecom was unlikely to start its own manufacture of equipment. "Our factories are not intended for this kind of manufacturing," he said.

The renamed division is to keep its old chief, Gordon Pocock, who remains at the head of the 500 strong London-based organisation. He will now have the responsibility for buying and selling added to his previous role of setting policy.

ICL products likely to be sold by the reflagged Merlin are the DRS range, System 25 and word processing equipment resurrected from the ashes of Nexos.

If you like our terminals you'll love our micros

TeleVideo, manufacturer of one of the most successful ranges of computer terminals, now has an 8-bit microcomputer.

All TS800 models are built around the Z80A chip and use the popular CP/M operating system.

A clear growth path is provided from the stand-alone 84K TS802 to the 128K multi-user TS816.

The TeleVideo micro, from Data Type



● Z80A based single user workstation
● CP/M and Microsoft operating system
● Supports up to 16 users
● High performance Winchester drives

● Screen and data screen
● Acts as intelligent terminal
● Nationwide support from Data Type

TeleVideo Systems
from Data Type

National Sales Office
Data Type Limited
Chesham House, 100-102 High Street, Chesham, Bucks HP8 3JG
Tel: 0494 51111 Telex: 450705

London Sales Office
Chesham House, 100-102 High Street, Chesham, Bucks HP8 3JG
Tel: 01-834 2000

Computer financing
Standbrook House, 2-5 Old Bond Street, London W1X 3TB

AVAILABLE
3083 J 24
AUGUST 1983

TELEPHONE: 01-409 2308 TELEX: 0154124

DEC mainframe challenge

by Kevin Pearson
DIGITAL Equipment has unveiled its strategy for linking computer systems with a major challenge to the mainframe manufacturers.

On Monday it launched a range of hardware and software products for distributed processing which provide fully shared processing and storage facilities through a high speed coaxial bus and an intelligent storage device controller. Users, DEC said, will be able to access programs and data transparently from a terminal without the

delays and file duplication of conventional networks.

First implementation of the products will be on DECsystem 20 mainframes. Plans are afoot to allow PDP-11 and Vax minicomputer architectures to use the systems, as well as DEC's personal computers.

Up to four DECsystem 20s can be connected by DEC's CI 70 megabit/second bus, although the bus is limited to 90 metres. Shared storage facilities are available from the HSC50 "intelligent mass storage server", which can support

up to 24 peripherals, and the CPS 20 common file system running under the TPOS20 operating system.

First installations are scheduled for the fourth quarter of 1983. In addition to links to computers in DEC's product line, the bus architecture will be linked to its DECnet network system and to its Ethernet local area network.

Prices range from £13,650 for each bus adapter, with the bus cable prices varying according to length. The HSC50 is priced at £22,750.

If you like our terminals you'll love our micros

TeleVideo, manufacturer of one of the most successful ranges of computer terminals, now has an 8-bit microcomputer.

All TS800 models are built around the Z80A chip and use the popular CP/M operating system.

A clear growth path is provided from the stand-alone 84K TS802 to the 128K multi-user TS816.

The TeleVideo micro, from Data Type



● Z80A based single user workstation
● CP/M and Microsoft operating system
● Supports up to 16 users
● High performance Winchester drives

● Screen and data screen
● Acts as intelligent terminal
● Nationwide support from Data Type

TeleVideo Systems
from Data Type

National Sales Office
Data Type Limited
Chesham House, 100-102 High Street, Chesham, Bucks HP8 3JG
Tel: 0494 51111 Telex: 450705

London Sales Office
Chesham House, 100-102 High Street, Chesham, Bucks HP8 3JG
Tel: 01-834 2000

IT82 conference	5
Software File	6
Micro News	7
Company News	8
Profile, Platform	12
Downstate by Chad	12
Liveware File	12
Letters	13
Workplace, Puzzle	14
People/Diary	15
Personal Computers	16/17
Company Profile	18
Books	19
Marketplace	20/21
Sales Bit	31
Line Noise	32
Top Jobs	23
Job Vacancies	22/31

EEC may erect trade barriers

by John Riley

EEC leaders are aiming to erect trade barriers to protect Europe's high technology industries.

The government leaders at the EEC summit conference in Copenhagen reached a series of agreements. These called for regulation of trade to protect the EEC and its new industries from outside competition, and for a decision by the end of March 1983 (the next summit) "on the priority measures proposed by the Commission to reinforce the internal market".

This would mean increased pressure on Japan both to import more European goods and to slow down its exports to the EEC.

The EEC summit is not part of the EEC machinery proper and has no powers of decision. It is a policy body which acts to provide a political impetus, and as such can help define priorities. Its agreements have to go through traditional channels where they can either end up as law or get bogged down.

There are several other agreements. One was on the need to help young people train for high technology - in the words of the official communiqué there was agreement on "creating more employment opportunities and professional training possibilities for young people to permit a fulfilment of their justified aspirations."

"In this connection it is important that they are given a chance to take advantage of the opportuni-

ties of tomorrow's high technology industries."

The Council of the EEC should also "speed up the adoption of the Commission's current and forthcoming proposals in the field of research, innovation and energy". These proposals include European programmes such as Insis in information technology.

European new industries and small firms stand to benefit if agreement can be obtained on the Commission's proposal to expand the New Community Instrument by a further three billion ECUs (European Monetary Units). This is specifically for loans to industry and small firms, and the summit urged the Council of the EEC to agree to this by the end of March.

Further details arising from these statements in the official communiqué will emerge as the various agreements are discussed fully in the relevant European committees over the coming weeks.

A spokesman from the Japanese Embassy in London commented: "We do not know exactly what decisions were taken. We do not welcome restrictive measures to our trade in principle, but we do appreciate that the increase of Japanese and other imports is causing serious difficulties to the economy of Europe. Japan will do what is possible to give a breathing space to allow Europe to restructure."



WINT... Developed the Kanji character Cobol compiler.

Japan buys first Kanji Cobol compiler from UK company

by John Kavanagh
A UK company's work on the world's first microcomputer Cobol compiler to support Japanese characters has paid off with a £190,000 order from a Japanese computer supplier.

Micro Focus, which has done £1.1 million worth of business in Japan with its CIS Cobol over the last 14 months, won the order from Oki Electric Industry. The contract rounded off a year in which Micro Focus almost doubled its revenue from last year's £2 million.

The Oki agreement covers advance royalty payments on up to 3,000 sales of the Japanese version of CIS Cobol on Oki's iF-800 microcomputer.

But this could be just the start: over 90% of Japanese business applications systems are written in Cobol.

The Japanese Kanji characters can be used in CIS Cobol for paragraph and data names and literals, the variables made up by the programmer. Cobol reserved words - verbs, data definition and so on - remain in English.

The Micro Focus product can handle all the 6,000-plus Kanji characters as well as Japan's Katakana alphabet used for Western words which are not represented by other existing Japanese characters.

"The most significant feature of this product is that application end users can see Kanji characters rather than a less familiar alphabet," said Ben Wint, who developed CIS Cobol some four years ago. Wint led the Kanji development team, which took just three weeks to complete its work.

Japan accounted for 10% of Micro Focus' business in 1981.

French air network under fire

by Jack Gee

AIR France is under fire from foreign airlines for persuading French travel agents to accept a network of reservation terminals which will prevent its rivals from proposing their own flights, hotel bookings and other facilities.

The computerised booking network, known as Esterel, will go into service in travel agencies all over France from the end of 1983.

It will be equipped with a specially designed Transac-Alcatel terminal. This has a 15/26 central unit with a 128K Octet memory, a one million character floppy disc, a VS 82,000 character memory and printer for producing both tickets and printouts. The Transac-Alcatel unit can also be used for office records and accounting.

Esterel was presented to the French Federation of Travel Agents at its annual conference in Marrakech, Morocco. The French computer service firm Sligos showed the travel agents a database of travel brochure information which it is preparing in conjunction with Esterel.

But foreign airlines spokesmen complained that Esterel will limit travel agents to booking only through Air France's Alpha 3 computer centre at Antibes, Southern France. Travel agents would not be able to access the booking systems of non-French carriers.

An official of a leading European airline said: "Travel agents will be deprived of the possibility of talking to other companies over terminals. Britain's Travicom system allows this. If the French go ahead with Esterel, Britain ought to tell Air France to get out of Travicom."

Esterel will cost about £900 a month to rent.

SALES BRIEF Philips wins \$10 million WP deal

PHILIPS has scooped a \$10 million order for word processing systems from the US Federal Accounting Office.

The first phase of the five-year contract involves delivery of 150 standalone word processors and 14 P5004 dual workstation shared logic systems at GAO headquarters in Washington, and 21 regional offices.

Good haul for Aim

DIGITAL Equipment Supplier Aim has landed three orders for accounting systems based on the PDP-11. The orders, worth \$91,000, include one from fish sellers Danbrit of Grimsby for vessel ledger accounting, and one from the Goodfellows supermarket group in Hull.

Revenue switch

THE Inland Revenue has chosen Data Training to provide conversion courses for its applications programmers at the Worthing office, which is changing from ICL to IBM computers. The order, worth £45,000, is Data Training's first contract for IBM training, although it has provided many courses for ICL users in both the public and private sectors during the last 12 years.

\$1.3 million drives

FLOPPY disc drive maker Micro Peripherals has sold \$1.3 million worth of 5¼-inch double sided hard disc drives to Prodata, the Belgian maker of business computer systems, through its subsidiary MPI Europe. The drives will be incorporated in Prodata's Series 70 and 72 order entry systems.

European rights

NETWORK Technology has signed an agreement with an estimated £10 million for European marketing rights to the IBM SNA communications network made in Australia by Systems Technology. Any Asci terminal device can be connected into an SNA network by Systems Technology 3703 gateway, which costs a typical user about £10,000.

Service contract

UK service company Nerd has won a two-year £100,000 contract to service the microcomputers, terminals and printers made by Shelton Instruments. Nerd will service the Signet 2 range of microcomputers launched at Computex 82, the Shelton 200 series and the 1000 range.

Prime upgrade

PRIME Computer UK has passed a £510,000 order for its twin 8080 system from Citicorp International Bank. The system upgrades the bank's existing Prime 400 equipment, and the increased processing power will run a real time dealing program for European securities.

Telecentres

ELECTROLUX has ordered six R2800 Telecentres worth £380,000 from Rediffusion Computer. The order includes six R2860 processors with disc, videotex terminals, VDUs, ICL communications, and videotex system software.

Harris success

HARRIS SYSTEMS has sold a £42,000 information processing system to Graham-Bell & Aveling Bedford, a subsidiary of British Leyland. The Harris 2400 replaced an IBM installation.

Optical fibre deal

GEC subsidiary IFF Telecommunications has won a £1 million contract from British Telecom to supply optical fibre cable between Letchfield, Staffs and Abingdon, Derbyshire by mid-1983.

Information Technology Year was given an official farewell last week at London's Barbican Centre... Kevan Pearson reports

End of IT82 'just the beginning' - Thatcher

INFORMATION Technology Year is not over, but IT82 had its official farewell last week at the Barbican Centre in London.

The occasion was what the organisers, Online Conferences, were undoubtedly delighted to describe as "IT82 The Conference" and offered a bevy of stars from British public life, debates, speeches and a 900-strong audience (invitation only but if you asked in advance you could get one) mainly made up of familiar faces from the computer industry.

The Prime Minister gave the keynote speech and had decided to take the safe course of addressing herself to Christmas present, leaving the guesses as to Christmas future to the industry professionals.

This was not only astute, but allowed Margaret Thatcher to concentrate on what was, after all, a great deal of her own show. She had appointed the first Minister for Information Technology, Kenneth Baker, and had authorised the funding of IT82, the programme to make the country aware of it.

Thatcher said: "This is not the end, it is just the beginning, and I said that 'the hardest task lies before us.' This was the harnessing of British genius as we have in the past." She made no mention of the Alvey report on the UK's response to the fifth generation challenge by Japan.

She then praised famous men, the organisers of IT82, and famous companies, the British electronics industry, pointing out that the UK was the first country in the world to put a microcomputer in every

school, and asked for "Applause please, we're British."

But the second speaker, Viscountess Bessie Davignon, vice-president of the European Commission, begged to disagree with the Prime Minister, at least to add that we were all European as well. His call was for a European information technology industry.

He said: "The world market for IT products is now about \$237 billion and growing at eight per cent a year in real terms. The IT industry in Europe employs five per cent of the European workforce, amounting to five million people. But 65% of the total workforce, is being affected by what they produce," he told the conference.

Davignon said there was plenty of scope to increase employment in IT, but the only way this could be achieved was through "collaboration and co-operation" between the 10 members of the EEC.

"Europe is not a very pleasant photograph for IT compared to the United States and Japan. The most significant indicator of the current problem is that taken as a whole the return on sales of European-based IT companies is just over 2.5%, which is only two-thirds that of the equivalent industry in Japan. The average in the US is double that of Japan."

The result of this, he said, was lower spending by European companies on R&D and marketing, with a resultant slide in market share.

"A loss of market share of one per cent a year, given that we only have 15% of the market at that our national market is 30% of the

world market, will have very serious consequences for economic growth in Europe," he explained.

He added that Europe's declining share of the world market had led to a reversal in our balance of trade in IT products, from an overall surplus in 1975 to a deficit of £2.5 billion in 1980.

Davignon went on to what was to be the conference's favourite theme - the impact of IT on jobs. He started on an optimistic note: the IT boom could create at least a further two million jobs, one million each in manufacturing and the services.

But the sting was in the tail: far from creating these two million more jobs, "present indicators suggest that a further two million are at risk in the industries most affected by the application of IT."

This topic was returned to, both by members of the audience and by the panelists. And it was not just the union elements at the conference - in the shape of Tim Webb, of ASTMS, Terry Duffy, general secretary of the AUEW, and Roger Darlington of the Post Office Engineering Union. Such people as Professor Tom Stonier of Bradford University, and Philip Hughes, chairman and founder of the Logica Group, both expressed concern on the impact of IT on employment, as did David Fairbairn, director of the National Computing Centre.

"IT needs to get to grips, as an industry, with the problems of employment - the restructuring of work - not just the palliatives of job creation," Hughes told the conference.

"We need a radical change in the way we do things. I was sorry to see that the Prime Minister did not make any reference to adult education. This is absolutely vital and we must be prepared to put immense funds into this area."

Fairbairn took up the point: "The conventional wisdom on employment must be challenged. I cannot accept that opportunities for employment do not exist. They do. But they aren't being taken up. That is an organisational problem which must be overcome."

The problem, as Hughes and others later made explicit, is that the jobs which will be needed following the much-vaunted information technology explosion, could be in the public sector: such as health care and education, or they could be in the entertainment sector.

Terry Duffy was the main speaker in the "Must There be Winners and Losers?" debate. His answer was simple. "That depends on what decisions are made and who makes them."

"I have a firm commitment to IT. Britain must spend more on IT in order to be competitive. We do

not take a negative view of IT because we know that the future hopes of the British economy depend on IT. But our acceptance of IT is not unconditional."

Failure to accept new technology would sabotage our future,

Ken Cure, an AUEW official, pointed out that understanding what IT means is what counts, not merely being aware that the term "Information Technology" exists.

The poll showed that though many more people were aware of the idea, the number of people who held favourable views of IT was the same, at 35%, as last year.

Interestingly, trade unionists thought more favourably about IT than did non-trade unionists.

A separate survey of business attitudes showed a favourable response - 94% thought it would make business more productive and 87% thought it would make UK companies more competitive, while 58% thought it would generate further unemployment.

IT Minister Kenneth Baker closed the debate, and the conference. His speech held more solid material than Thatcher's - he even mentioned the Alvey Committee and its report and said the

but new technology should serve society, not the other way round. He supported his point with the harsh fact that in the computer and electronics industries 8,000 jobs were lost in 1981 alone, yet this was supposed to be where jobs were being created. "Growth in IT will mean fewer hours of work being available for everyone."

His answer to this - and the answer given by many others during the two days - was a reduction in the working week, with "more genuine leisure time available to everyone, not the enforced idleness of the drole queue."

Clive Latimer, manufacturing director of Mann Electronics, of the Mann Industries Group, was given the task of responding to Duffy's interesting and entertaining speech.

"Latimer's theme was that as the 'Industrial era draws to a close, the concept of work will probably die with it."

"This means changing the way we see work and redefining ourselves once and for all of the 'work ethic.' Education is an end in itself, and a lifelong experience," he said.

"The industrial society created the concept of work and failed to live up to it."

It was left to Ken Barnes, the IT82 project director, to sum up the achievements of IT82. But he was given only 15 minutes, not exactly a surfeit of time in which to describe a whole year's achievements.

Help had been at hand though, in form of a MORI poll on information technology, showing a massive increase in the general



The Prime Minister used some of IT to get it across to an audience dominated by individuals from the computer industry.



DUFFY... "Our acceptance of IT is not unconditional."

'£150 million market in UK' for Datapoint's new portable terminal

by Andrew Thomas

DISTRIBUTED processing specialist Datapoint has launched a new portable terminal - and didn't pay a penny towards its development.

The terminal has been designed and built by Reading-based Portable Computer Terminals, a six-man operation headed by ex-Datapoint sales manager Hywel Evans. PCT was set up in January with £1 million of venture capital from the City, raised by Evans.

Taking six of Datapoint's staff, Evans formed the new company, which has received no financial backing from Datapoint itself. There is not even a Datapoint presence on the PCT board.

But now that the terminal is in production, Datapoint is handling all aspects of marketing and support and, according to managing director Brian Gifford, is headed for a market of 60,000 units, valued at £150 million, in the UK alone.

The terminal is aimed chiefly at the van sales market, where salesmen visiting retail outlets can use it to keep track of prices, orders and stock, and produce a printed invoice on the spot. Application programs are downloaded from a central computer, and details of transactions handled by the device can be returned there by telephone line.

A four-line, 128-character LCD display is incorporated in the device, which can run for up to two weeks on a single charge, and weighs only 4½ pounds. Should Evans' prediction of 1,000 units sold in the next 12 months come true, production will be set up in the enterprise zone at Swavesey. "It could mean at least 40 new

jobs," says Evans. "We have had promises of more than £450,000 in development aid, and offers of effectively rent-free factories for seven- or eight-year periods."

Priced at about £2,000, depending on quantity, the terminal has been designed around Datapoint's Databus language, although Evans says that other manufacturers' hardware can be accommodated.

"We didn't even look at anyone else to do our marketing for us," he says.



GIFFORD... "Heading for a market of 60,000 units."



Safely, safely new technology enters newspaper offices.

Journalists go online in IoW

by Philip Hunter

THE Isle of Wight Weekly Post is the first UK newspaper to persuade its unions to accept stories written and edited by reporters online at a computer terminal. The paper has agreed in principle with the National Union of Journalists and the National Graphical Association to a three-phase computerisation.

"We couldn't get the NGA nationally to go the whole way, so we had to adopt a phased approach," says Peter Thompson, associate editor of the 102,000 circulation Portsmouth Evening News, which will follow its sister Isle of Wight Weekly into the first phase next year.

The NGA gives the three-phase scheme a muted welcome. "The

unions have always co-operated with the application of technology, but we are still to be convinced of the full merits," says a spokesman.

Only the first phase has been formally agreed by the NUJ and NGA. This replaces typewriters with video terminals for reporters, who write the stories, correcting them as they go along with a word processor. The finished article then goes down a telephone line to a Digital Equipment computer in Portsmouth, from which it is printed out.

Sub-editors then cut, correct and write headlines for the stories by hand, as usual.

The only other UK newspaper to go this far is the Nottingham Evening Post, which as early as 1978 introduced terminals into its

editorial office. But the difference is that there was a long fight with unions resulting in a completely non-union paper.

The second phase, scheduled for implementation in September 1983 at the Portsmouth papers, will bring the sub-editors online as well. The final stage three, provisionally agreed to begin in March 1985, will bring terminals into the photocomposition room. News copy will then be set by journalists and go straight to the bromide sheets for printing.

The technology for full computerisation has been available for several years, and has already been implemented by many newspapers in other countries, especially in the US. But union resistance means that the UK will have to wait.

ADD GRAPHICS

WITH THE LOW COST HIGH QUALITY SOLUTION

£1250.00
(VT100 extra)

VT 100 GRAPHICS DISPLAY

Now available with plain paper graphics print feature

- Full graphics capability
- Tektronix® software compatible
- Green ray cursor
- Green raster scan display
- High resolution mode
- Light pen option
- Retains VT100 features
- Supports graphics packages

In stock now! Prices are single unit quantities. Ex VAT

Now with DEC field service

RIVA

RIVA TERMINALS LTD
Head Office: 9, Woking Road, Woking, Surrey GU24 0JG
Tel: Woking 04832 77001 Telex: 55000
Northern Office: 10, Harrogate Road, Harrogate, North Yorkshire HG1 1JG
Southern Office: Tel: 01474 60071

Conversion needs experienced staff

by George Black
DON'T undertake a conversion without a proper plan, or using inexperienced staff, DASH's Tom Patti advised a user workshop.



DREYFUS... "Restricted by huge investment in existing software."

"Would you try to install a major, brand-new system without a plan using junior personnel? Then why even consider doing a conversion that way?" said Patti. He was speaking at the first of a series of IAL Gemini workshops in London's Barbican Centre, entitled Data Processing Conversion with No Surprises. Most managers hated the very word conversion and viewed the process as traumatic, disruptive, expensive and unending, he said. But it did not have to be such an uncontrollable leap in the dark. His prescription for overcoming the problems was to have a thorough survey in advance. "You have to get very definitive about where you're coming from and where you're going. Talk to your people about how you are going to do it." It was important to list not only the programs, files and jobs to be converted, but also those which would not need to be converted. The number of lines of code involved was not a safe basis for

Key to relational databases

THE major deficiency in existing relational database systems is the lack of support for primary and foreign keys. This is the view of Chris Date, advisory programmer to IBM in California and author of a new book, *An Introduction to Database Systems*. Date told a Pergamon State of the Art seminar in London that no one had yet done a good job on the matter of keys, though Nomad and other systems were moving in the right direction. The book tackles eight topics concerning databases, superseding Date's previous work. Date warned delegates to the seminar that some older systems of dealing with the problems of concurrency had now been proved to be theoretically incorrect. Locking mechanisms to ensure that several concurrent transactions did not clash were not always perfect, he said. Statistical databases could sometimes be penetrated by people who were not entitled to access and who could gain detailed information where only a general abstract was supposed to be available.

Colour graphics takes to road

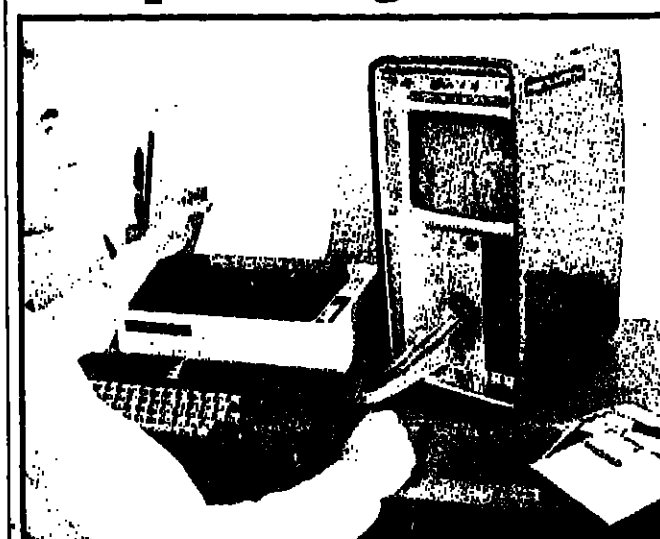
COLOUR graphics go on the road this week as a Sperry Univac team sets out to demonstrate its latest addition to Mapper software. Putting the VDU in the back of a Cortina, the three-man team from North London is to tour the country introducing the system to outside users as well as the company's own people. The 16-colour business management system will be mounted on an Intecolor 8001R high resolution terminal made by Techex and marketed in the UK by Intelligent Systems Corp. The real time system's graphics extension was unwrapped in the US in the autumn and is to be available here in the first quarter of 1983. Non-computing users will be able to learn how to produce their own pie charts or bar charts from raw statistics. And executives can doodle to edit the company figures in an easily digestible format. The Mapper is so organised that it can be handled at various levels of competence from complete novices to machine code experts. And for less disposable data a hard copy Hewlett-Packard plotter can be attached. The acronym stands for Maintaining, Preparing and Producing Executive Reports, but the emphasis is now on turning the art of report generation into a more aesthetic process.

Unix tool comes to UK

A UNIX version of a successful American design tool is to be available in the UK from January. PDL/81 is the Unix version of PDL which has had considerable success in the US running on IBM mainframes and Digital Equipment PDP-11s. Under Unix the product will run on DEC PDP-11 and Vax, and 16-bit micros such as the Onyx, Zilog and Altos machines. WP Computers of Stevenage has been awarded the exclusive UK distributorship for PDL/81, which is claimed to cut development times by as much as 30%. "The benefits are astounding, as we have found out by using PDL," said Graham Evans, managing director of WP Computers.

MICRO NEWS Chip-making equipment for Edinburgh University

Shape of things to come?



Could this be the shape of computers to come? Kenilworth's 83C, due for launch in January, measures 14 1/2 inches by 9 1/2 across the desk-top and 19 inches high, so that the screen is at eye level. The 83C gives 3/4 or 1 1/2 Mbytes disc capacity with 64K RAM. The 83CG model offers graphics with a colour monitor connector.

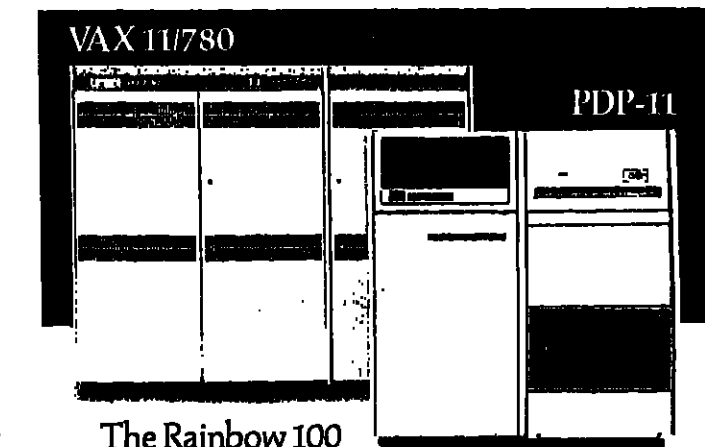
WHAT may be the most advanced piece of chip-making equipment in Europe is to be delivered to Edinburgh University in February. The university's micro-fabrication facility - an offshoot of the electrical engineering department - is to get an Eaton wafer stepper at a cost of about £600,000 on a grant from the Science and Engineering Research Council. This means that Edinburgh will be able to supply chips to other British universities which are working in the same research field. Edinburgh has now received £2.5 million out of a total programme of £7.5 million to be spent on chip research by SERC over the next four years. The optimatrix 8010 wafer stepper, made by Eaton Semiconductor Equipment Operations in the US, will give the university the most advanced optical techniques available for integrated circuit production. Dimensions as small as one micron per circuit can be printed. "The apparatus is in the forefront of technology," said a SERC spokesman.

Rosen follows the Osborne route

by Julian Allason
THE landing at Las Vegas was not a smooth one. Up and down the aircraft visitors to the Comdex show clutched their stomachs and their Osborne is. Inside the vast convention centre the story was the same - portable computers everywhere. Many of the new offerings tipped their hats in the direction of IBM, the supremacy of whose Personal Computer is now well established as the touchstone by which others are judged. The new DOT portable from Computer Devices of Burlington, Massachusetts, went all the way with the same 8088 microprocessor and MS-DOS operating system as the IBM Personal. Priced at \$2,995, the standard DOT has two 3 1/2-inch floppy drives offering 370 Kbytes of micro floppy storage, 9 x 5 1/2 inch bit-mapped display and 32 Kbytes of user memory expandable to 705 Kbytes of continuously addressable RAM. For an extra \$1,000 the company will supply a model that incorporates its own 132-column matrix printer. An eight-bit Z-80 CPU will also be available as an option. Another company claiming a first in the IBM PC-compatible field employed a rather different approach. Colby's PC-1 is a kit that converts the standard IBM PC into a portable computer, weighing 26 lbs. For \$899 the PC owner gets a 9in diagonal high resolution display, switching power supply and interface boards housed in an aluminium and plastic case. Another industry pundit following Adam Osborne's route into microcomputer manufacture is Ben Rosen, who made his name as author of the weekly Rosen Electronics Letter. Rosen's venture capital company is the principal backer of Compaq Corp, which showed its own 16-bit IBM-compatible portable computer. In January Americans will be able to buy the 8088-based unit with 128 Kbytes of RAM, 9in diagonal high resolution CRT and 320K 5 1/4in minifloppy, for \$2,995. Two vendors, Kaypro and Jonos Computer, have nonetheless taken the plunge. The Kaypro 5 with a 5 Mbytes drive will go on sale shortly in the US at \$4,485. The most truly portable system was the Teleram 3000 Office Station, about the size of a 3in. thick A4 pad and weighing 9 lbs. For mobile use the system has a four-line 80-column LCD display, 64 Kbytes of RAM plus 128 or 256 Kbytes of non-volatile bubble memory. Power is provided by rechargeable lead acid batteries with a five-hour life between charges.

Is Digital about to set the standard in personal computers too?

Since 1971 Digital's PDP-11s have been synonymous with 16-bit computing. And for the last four years the VAX 11/780 has been regarded by the computer industry worldwide as the yardstick in 32-bit computing. Now Digital have created a series of three personal computers for professional applications. Powerful, yet easy to use. Designed without compromise. Consider a few of the standard features that set them apart.



The Rainbow 100 is probably the ultimate CP/M machine. It runs both 8-bit and 16-bit CP/M programs. Automatically. And all for the price of an ordinary 8-bit personal computer. Options include "bit-mapped" colour graphics and "executive" word processing. The DECmate 11 is the administrative work station. It's tailored for "secretarial" word processing, office management and list processing. And, of course, it can run conventional CP/M programs. The Professional 300 series is the multi-

purpose work station that's based on one of the world's most popular minicomputers, the PDP-11. Which means that it's compatible with the VAX and PDP-11. And can support various communications systems including SNA, a CP/M option and powerful software development tools. Each system can emulate the VT100 terminal. And each system is covered by support services that are normally only standard on large systems. There's even a free one year on-site warranty. Use the coupon below to receive your free 180 page copy of our "Guide to Personal Computing" And find out for yourself how different personal computing can be.

To: Digital Equipment Co. Limited, Customer Information Centre, Jay's Close, Viabiles Industrial Estate, Basingstoke, Hants. RG21 4BS. Telephone: Basingstoke (0256) 59200.
Please send me my free "Guide to Personal Computing".
Name _____
Position _____
Company _____
Address _____
Application _____ Phone _____ (CV118/13)

Doing more. The Digital difference.

CP/M is a registered trade mark of Digital Research Inc. VAX, Rainbow, Professional, PDP, DECmate, VT and Digital logo are trade marks of the Digital Equipment Corporation.

The Rainbow 100 accepts both 8 and 16-bit CP/M programs.

The DECmate 11 is a professional word processor.

The Professional 300 series is based on the PDP-11.

digital

Leading-edge OEM products are just part of the story. Wait till you hear about the support we put behind them.



When you're looking for a supplier, obviously you want the most competitive product available — at a competitive price.

But those two things are really just the beginning of a solid, long-term OEM relationship with Hewlett-Packard. We also give you the service, training, documentation, support and the commitment to customer satisfaction that you'd expect from a major international company.

You can be one of our biggest strengths. And vice versa.

Whether you integrate our hardware into your systems, or develop software for specific applications, your special expertise creates entirely new markets.

So we want to make it easy for you to do just that. We start by offering a wide range of products to work with: from fully programmable hand-held computers and desk-top models to complete data processing systems; along with an even wider selection of peripherals that are engineered to work together. That means you won't have to worry about interfacing.

With our modular approach to hardware technology, you can buy boards, boxes, or complete systems, and concentrate on building the products your customers are looking for without taking on any new problems of your own.

We put a lot into our products. And a lot more behind them.

You're probably familiar with the kind of performance and reliability we deliver. But we think you'll be just as pleased to see the level of support we give you.

Since we're interested in solid, long-term relationships, we're ready to put all the strength of our support organisation behind you and your customers. So you can offer site planning and installation; contractual maintenance; per-incident and self-support services.

You'll have the resources of our 170 offices in 39 countries behind your product, on any basis you like. From comprehensive, 24-hour, on-site maintenance to economical 'return-to-us' service.

We do a lot to protect your software investment, too, by making our new products compatible with our earlier models. For example, programs developed more than eight years ago for our first HP 3000 still run on our latest generation of the same computer. So you can upgrade to a much higher-performance system at practically no software expense.

In short, we do all these things with one simple goal in mind: to help you make a profit. Because if *you're* not successful, *we're* not successful. It's as simple as that.

Let's work together.

Obviously, there's more to a successful OEM relationship than we can discuss here. We've put together a new OEM brochure that gives you full details about our products, policies, and the way we protect you. It even covers the special discounts we offer for your prototype development. Write to us now for a copy. Or simply call your local HP office. Then let's go to work.

Hewlett-Packard Ltd, Winnersh, Wokingham, Berks., RG11 5AR. Tel: Wokingham (0734) 784774.



Local HP offices are also at Belfast, Birmingham, Bristol, Leeds, Manchester, Newcastle, Redhill, St Albans, Southampton, South Queensferry — Scotland, Dublin — Eire.

Send to Hewlett-Packard Ltd, Winnersh, Wokingham, Berks., RG11 5AR.

Yes, I'd like to see your new OEM brochure.

I develop products for:

☐ technical applications ☐ business applications

Name _____

Title/Position _____

Company _____

Address _____

Postcode _____

Tel No _____

Handwritten signature: J. J. J.

Digital methods keep Ordnance on the map

OUR priceless national asset, The Ordnance Survey map collection, is slowly and doggedly being digitised. The process has been going on since 1972 at Ordnance headquarters in Southampton, and now 2,500 maps are digitised annually at the three basic scales of 1:1250 for urban areas, 1:2500 for rural areas, and 1:10,000 for more remote mountain and moorland regions.



VICKERS... Digital maps can be more accurate.

ing rate of conversion, it would be 2050 before the whole UK is covered. But the process will speed up, and Ordnance expects data covering most of the UK to be digitised by 1993.

At present it is mainly urban areas that have been digitised, although only a small start has been made on London. Areas are digitised as they come up for resurvey, and for this reason lucky Cornwall has been completely converted.

Map digitising involves assigning two qualities to each feature: a grid reference of its position, and a code of its type, which may be road, fence, tree or bridge.

Flexibility and marketing are the two big advantages of digital data to Ordnance Survey.

The digital data can be sold, and is being used already by local authorities and water boards, among others. Here the flexibility comes in since the data can be edited according to user requirements, with an architect for example, being able to project alternative building designs on to existing maps.

in the shops within five years.

Another big bonus of digital map data is that smaller scale maps can be produced automatically from the large ones.

The scaling down needs a program to describe which features of the large scale maps are to be left out of the smaller ones. One such feature is the domestic garage, which is included in the large 1:1250 maps, but not in smaller scale ones.

Text can be a problem. If it is scaled down with the map, it soon becomes unreadable and looks isolated as other features are dropped out. But if it is kept the same size, it splits its boots, and overwrites adjacent map features.

Clearly the answer is what has always been done in practice: adopt some intermediate text scaling, abbreviate the words, or leave them out altogether. But such sophistication is as yet beyond the computer, and will have to wait for some derivative of artificial intelligence applications now being developed.

Perhaps the hardest problem of all is that of copyright. All Ordnance Survey maps are Crown Copyright, which means that they may not be reproduced without permission for 50 years after publication. With the map data in digital form, copyright becomes a nightmare.

Ordnance Survey has a copyright branch dedicated to pro-

tection of the huge investment in maps and data. "We still expect to collect royalties when a client buys a digital tape from us, plots it and beams the information out," explains Liz Owen, a member of the branch. "But a lot of our customers such as local authorities are already licensed and have an in-built facility to use Ordnance digital data."

Because of the need to exploit the huge existing heritage of data in hard copy map form, Ordnance Survey differs from other organisations in its use of digital mapping tables. There are 24 Ferranti Frescan digitising tables to capture the data from enlarged film negatives of the maps. Two Xytronic fast plotters are used for checking the plots, which are then edited on one of three LaserScan workstations. Two Ferranti Master Plotters produce the quality output on to photographic film for subsequent map production.

The original digitising from the enlarged map negative is performed using a cursor carried manually across the table. Each feature is captured by placing the cursor over it, and selecting the appropriate button from a menu of features - fences, houses, roads and many others. The co-ordinates of the feature are recorded automatically on to magnetic tape.

At present the initial digitising is a batch process, while the correcting is online. Eventually, when



OWEN... Tackling copyright problems of digital map data.

digitisation of the UK is nearly complete, the whole process will be online, which is more efficient because any mistakes are apparent at once.

The Ordnance Survey's ICL 1900 is soon to be replaced by the ICL 2906. "We need to maintain our present software, but at the same time need room for new systems," says Captain Tony Vickers, who is on loan to the digital mapping division from the Army.

Vickers showed us some prototype maps printed direct from the digital data in the predictably well covered area of Southampton, the Ordnance base area. He pointed out that there is little loss of accuracy. In fact the digital maps are

sometimes more accurate, he says, indicating some map contours.

Unlike Ordnance Survey, other organisations, notably the US defence mapping agency, are digitising from scratch. In this country similar projects are in progress at military establishments like RAF Farnborough.

Here the approach is different, as there is no original hard copy map data to capture. The process involves use of aerial photographs taken in close succession, which are then compared against known reference points. Simple trigonometry then yields contours.

Eventually all maps will likely be produced from aerial photographs with occasional ground surveys as back-up.

Scroggs feels the sting in our Christmas tale

IT WAS Christmas Eve, and Edward Scroggs was a happy man. In his 10 years as DP manager of Pontypriidd Smokeworks, his principal task had been the restructuring of the company financial year to correspond with the end of the calendar year, and he had finally convinced the board to accept his proposal.

How Scroggs had achieved this was not clear, but it was rumoured among the rough journeymen in the smoke foundry that he had in his possession certain photographs of the chairman and the canteen manageress which might prove embarrassing should they appear on the inter-works darts league noticeboard.

And so it was that Scroggs, not a man usually given to savouring enjoyment, let alone glee, smiled quietly at his reflection in the mirror of the executive toilet. Not many had the requisite status to hold a copy of the key to this Shangri-La which boasted soft toilet paper, but Scroggs' 10 years of unflinching devotion to the company had not gone unnoticed or unrewarded.

Scroggs had no time for Christmas. He lived alone, in a frugally furnished house, had no friends, and lived for his work.

This was the main reason for his attempts to have the year-end processing carried out during the week between Christmas and New Year. In previous years, the Smokeworks DP department had closed down for Christmas week, and Scroggs had been obliged to sit at home, reading through old compilation listings, nothing who had made mistakes which he might be able to use as ammunition for one of his frequent and unpleasant attacks on his staff.

This Christmas would be different. "With year-end coming up, we can't afford any mistakes, so the entire systems staff will be in attendance over the next week to

make sure everything goes all right," Scroggs told his staff. The staff grumbled under their breath. Scroggs had them where he wanted them. The Smokeworks was the only employer for 30 miles.

Down in the machine room, he visualised the scene as the new ICL 2966 glided effortlessly through the first of the year-end runs. It had been one of his best moves, he mused, to get rid of the old IBM 360, which although capable of doing the work required of it, needed 30 operators on three shifts to keep it running.

The introduction of the 2966 meant that VME could be used, and the need for operators had been greatly reduced - though not by the savage amount instigated by Scroggs. Only one operator a shift now remained, Scroggs choosing the weakest-willed, and wherever possible, crippled staff. He still bore the scar over his left eye where, years before, a headstrong young operator had thrown a 200 Mbyte disc pack at him for refusing to pay him overtime for working right through a weekend.

The evening shift operator, Tim, known as "Tiny" ever since his terrible accident with the de-collector, gazed morosely at the master console. His new artificial legs were to have been fitted that week, but with all leave cancelled, all he could do was dream.

On the floor above, Scroggs felt that, at last, all was right with the world. There would be no miserable Christmas break for him this year.

A sudden metallic clanking woke Scroggs from his reverie. In the doorway, shrouded in a luminous haze, stood a rust-streaked IBM 360, its lights, dim with age, flickering menacingly. A line printer materialised beside him. Over by the Warm-O-Lux hand drier, a cluster of seven track tape decks appeared.

The printer beside him clattered into life. On ghostly sheets of faded ectoplasm, the words "YOU WILL COME WITH ME LINE FEED CARRIAGE RETURN" appeared.

Horror gripped him as ghostly fingers of flickering blue mist reached out. Suddenly, Scroggs felt himself moving up towards the ceiling. He braced himself for the impact which never came. The plaster opened up, allowing Scroggs to pass through unscathed. As he floated through the roof, into the chill night air, he noticed that the 360 had followed him.

"I've seen you before, haven't I?" asked Scroggs.

YES I AM THE GHOST OF COMPUTING PAST LINE FEED CARRIAGE RETURN YOUR OLD 360/158 LINE FEED CARRIAGE RETURN, rattled the ghostly printer.

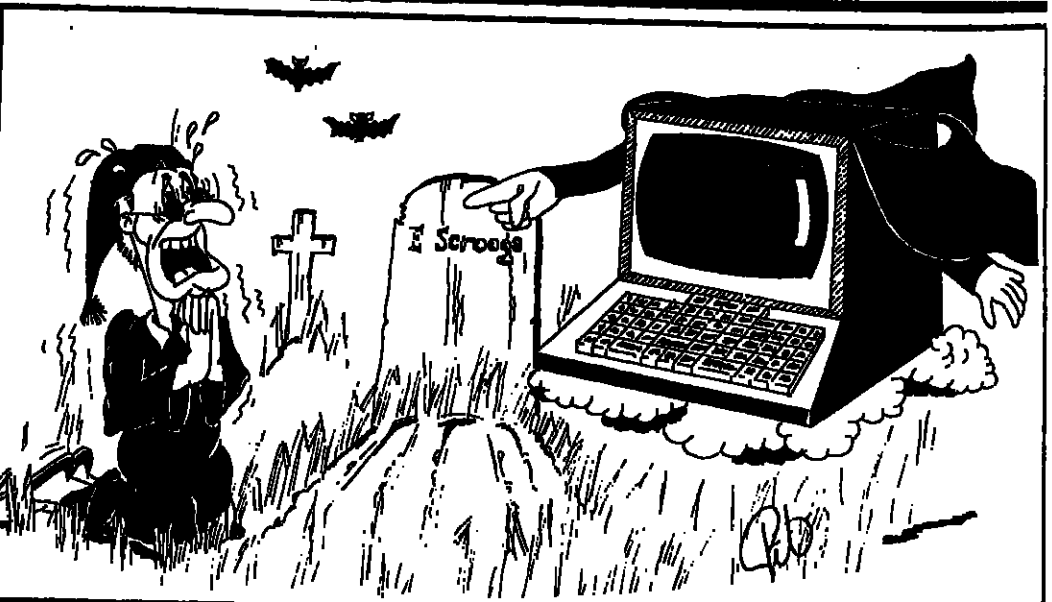
"Why do you keep printing line feed carriage return?" queried Scroggs.

INCOMPATIBLE CONTROL CHARACTERS PRINTER SUPPOSED TO BE PLUG COMPATIBLE LINE FEED CARRIAGE RETURN, replied the machine.

Beneath them, the winter landscape of South Wales sped past. The Smokeworks receded as a new housing estate loomed unattractively on the horizon.

"Where are we going?" asked Scroggs.

TO SEE WHAT YOU HAVE DONE TO OTHERS LINE FEED CARRIAGE RETURN.



most empty half pint glasses. Scroggs recognised the miserable gathering as the erstwhile 'B' shift. The odd phrase from the redundant operators impinged on his consciousness.

"No work... kids hungry... sold the telly... only drink I've had all week... wife left me... all his fault... kill the bugger if I get my hands on him."

"Who are they so angry at?" asked a worried Scroggs.

HAVE YOU NOT READ "A CHRISTMAS CAROL" BY CHARLES DICKENS LINE FEED CARRIAGE RETURN? "I haven't got time to read," replied an irate Scroggs.

The 360/158 fell silent. It was thinking. This is what it was thinking: "If he hadn't read the book, then I don't have to go through all that business with the orphans, and Tiny Tim's leg operation. Computing present and computing yet to come can stay at home. I'll go straight on to the graveyard bit."

The Dog and Bucket faded, to be replaced by the cold stillness of a graveyard. In the distance an owl hooted.

"Why have you brought me here?" asked Scroggs.

pid machine," blustered Scroggs. "I HAVE DIRECT COMMUNICATION WITH DHSS COMPUTER RECORDS YOUR NAME CAN BE CHANGED LINE FEED CARRIAGE RETURN"

"What do you mean?" I MEAN I'M GOING TO KILL YOU IF YOU DON'T MEND YOUR WAYS LINE FEED CARRIAGE RETURN.

"Aren't spectres supposed to give advice rather than death threats?" enquired Scroggs.

TIMES CHANGE WE MUST ADAPT TO THE 1980S YOU WILL DIE IF YOU DO NOT CHANGE WE HAVE THE TECHNOLOGY LINE FEED CARRIAGE RETURN.

"Oh, all right then," replied Scroggs, ever receptive to a convincing argument.

And so it was that the year-end was mysteriously moved back to its original September date, Tiny Tim did have his leg operation, the staff were given a Christmas bonus and two weeks holiday, and the 2966 was returned to ICL on the grounds that it didn't perform to specification to be replaced by an old 360/158.

Scroggs bought a television and watched the Queen's speech and Morecambe and Wise. "I'm sure people can't really enjoy this sort of thing," he mused, but the framed photograph of the 360 above the fireplace reminded him of the alternative. "Yipper!" he shouted, donning his paper hat.

Workplace is compiled by Philip Hunter and Andrew Thomas.

PUZZLER

A LARGE farm is enclosed by a three-rail fence, each rail being 12ft long. The tract of land is exactly square. Strangely enough, there are as many cars enclosed as there are rails in the fence. What is the area of the farm?

of fence construction, the width of the supporting posts can be ignored. And the various rail sections, they also have no bearing on the problem.

See page 31 for solution.

PEOPLE



SOKELL... Joins from Menzies.

Norman Harris has joined Computervision Europe as European marketing manager within the Architectural, Engineering, Construction (AEC) Support Group. He was formerly with British Nuclear Fuels where he was computer applications manager.

New vice-chairman of the Peripherals Suppliers Association is John Turner, UK sales manager with the data products division of Thorn BMI Datastech. Turner joined the PSA in 1979 and has been a committee member for the past year.

Ex-Wang territory sales manager John Aherne has been appointed sales manager, Accron Microsystems, at Newton Laboratories.

Quotel has appointed John Bowman-Daniels as salesman. He was previously with Hambro Life.

DIARY

JANUARY 5
IT82 - What happened? IDPM Central London branch. Altergo, Imperial House, 15-19 Kingsway, London WC2. 6.00.

JANUARY 5-6
Viewdata. Conference on the state of the art. Institute of Information Scientists WP and computer information special interest group. Details Mrs Bird on: (051) 645 4000 ext 8611.

JANUARY 10
Voice input and output. BCS East Anglian branch. Norwich City College of Higher and Further Education, Ipswich Road, Norwich. 7.00.

Graphics by Edeiwade. IDPM Norfolk branch. Castle Meadow, Norwich. 7.30.

The "square wheel" syndrome - recurring problems and pitfalls encountered by a consultant. Speaker Jimmy Macintyre, principal of Pactal. IDPM Scottish branch. Edinburgh University, Student Association, 60 The Pleasance, Edinburgh. 7.30.

JANUARY 11
Automotive micros. BCS Harlow branch. The Norfolk Room, The Saxon Inn, Southern Way, Harlow. 7.30.

Micros - the changing role of DP management. BCS London North-west branch. Bull Hotel, Gerrards Cross. 7.30.

Meeting. BCS Kent branch. Department of Computing, University of Kent, Canterbury. 7.30.

CONFERENCES

COBOL must keep pace with new technologies in order to serve the DP user. In the case of VDU screen handling and transaction processing, manufacturers and suppliers have been forced to develop their own divergent processes, with the result that VDU-driven applications are among the least portable and most idiosyncratic of all. Before long, nearly all applications will be of the transactional rather than batch type - so what answer does Cobol have to this challenge? These are the points to be raised at A Screen Management Facility for Cobol, a meeting to be held by the BCS Cobol Specialist Group on January 26 in London. Venue is the BCS headquarters in Mansfield Street and it starts at 2.15. Details from the BCS on 01-637 0471.

A national conference and exhibition to explore the problems and potential of technological innovation for older people has been organised by Age Concern.

Scheduled for January 31, it will be held at Cannon Hall in South West London. Fee is £10. Further details from Age Concern, 60 Piccadilly Road, Mitcham, Surrey CR4 3LL. Tel: 01-640 445.

The London branch of the Information/Word Processing Association (IWP) has announced that its first one-day seminar programme for 1983 will focus on opportunities to connect word processing and typesetting systems. The session aims to bring together professional printers and WP users, with speakers who will discuss the latest technology, practical methods for connecting the systems, and the cost of in-house and external use of the systems. It will be held at the City Conference Centre in London on February 24. Fee to IWP members is £55; non-members £55. Details from Quadrant, 3 Courtfield House, Baldwin Gardens, London EC1N 7SB. Tel: 01-242 8697.

NTL appoints new managing director

NETWORK Technology (NTL) has a new managing director, Trevor Sokell, who has also been appointed a main board director of Information Technology, the holding company which co-ordinates and manages three subsidiaries, NTL, OTL and CTL.

Sokell joins the company from Menzies Communications where he was managing director from 1977. Menzies Communications, a subsidiary of the Menzies Group, was established by Sokell to specialise in computerised voice response systems, viewdata and retail point of sale.

Before that, Sokell was with ICL for 15 years, where he held a variety of sales and product marketing positions. Just before leaving ICL he was business manager for communications products.



Two new analyst/programmers have joined Prolog Systems. Clive Martin-Ross was previously with RHM foods and Sid Seton was formerly with Applied Communications. Both now work in Prolog's Hewlett-Packard division.

Electronic Associates has appointed Alan Gilmore to its sales team. He joins EAL from Hunting Hivolt where he was sales manager.

Product manager at Impectron's optoelectronics division is Paul Spraggate. He joins the company from the Radio and Space Research Station at Datchett.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Philips Business Systems Viewdata has appointed Dr Ewyl ap Gwilym (above) as general manager. He was previously responsible for small office systems marketing at Philips' business equipment division.

Meet your market at COMPEC WALES

Britain's most successful series of exhibitions for computer systems, peripherals and software is going to Wales. Echoing the success of Compec in London, it follows Compec North in Manchester and Compec Scotland in Glasgow, as professional computer shows offering a highly defined geographical market.

COMPEC WALES in Cardiff between March 22-24, 1983 will allow companies selling into this important market to focus on computer users throughout this part of Wales and the West Country.

Surveys of visitors to computer exhibitions demonstrate that users prefer to attend a show which is local to them. Compec North, for the second time, and Compec Scotland were enthusiastically welcomed in 1982, and both events are being expanded for next year.

COMPEC WALES with a superb venue in the centre of Cardiff ensures the continuing success of these major computer events.

Make sure your company is represented.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

Meet your market at COMPEC WALES

Britain's most successful series of exhibitions for computer systems, peripherals and software is going to Wales. Echoing the success of Compec in London, it follows Compec North in Manchester and Compec Scotland in Glasgow, as professional computer shows offering a highly defined geographical market.

COMPEC WALES in Cardiff between March 22-24, 1983 will allow companies selling into this important market to focus on computer users throughout this part of Wales and the West Country.

Surveys of visitors to computer exhibitions demonstrate that users prefer to attend a show which is local to them. Compec North, for the second time, and Compec Scotland were enthusiastically welcomed in 1982, and both events are being expanded for next year.

COMPEC WALES with a superb venue in the centre of Cardiff ensures the continuing success of these major computer events.

Make sure your company is represented.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 11 Throby Way, Sutton, Surrey SM1 4QQ. Tel: 01-645 8040.

For information about exhibiting at COMPEC WALES contact, The Exhibition Manager, COMPEC WALES, IPC Exhibitions, Surrey House, 1



STABLER (left) and PRICE... Looking to the next Zip generation.

DATA DYNAMICS wants to make it known that the company is functioning, and has not, as previously reported, gone bust. Well, let's say it has been resurrected - as far as customers are concerned at any rate.

As for suppliers and other forms of unsecured creditors, they will find that the company they were dealing with, Data Dynamics, is now defunct, and that a new company, also called Data Dynamics, has taken its place.

The new company will not be paying the old company's debts. Basically, the old Data Dynamics had its name changed by the receiver to Data Dynamics Realisations - of which all that is left are debts.

This process allowed a risk capital company called Innotech to step in and buy up the assets and the business of Data Dynamics,

It's back to Square One for a resurrected Data Dynamics

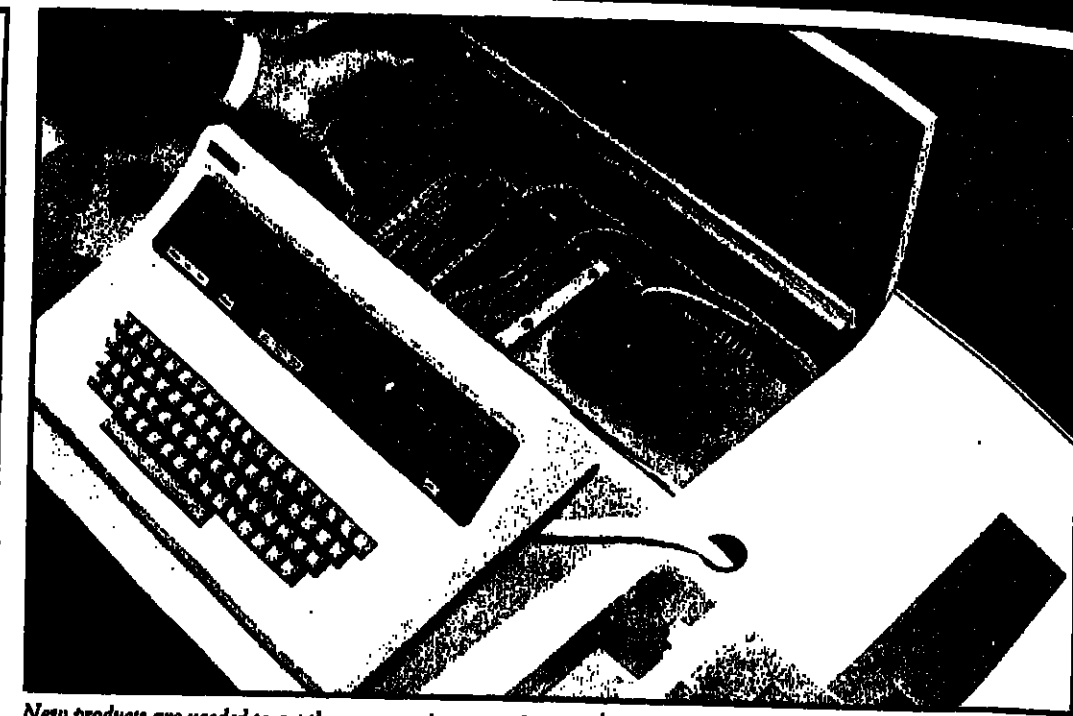
The company is now on the road to recovery... Boris Sedacca reports

including the name, using a shell company called Scanprobe and re-registering its name as Data Dynamics.

Neat.

"I have to make it clear that we will not be paying the old Data Dynamics' debts, nor are we obliged to do so," says Innotech director Humphrey Price.

Innotech is a 15-month-old venture capital company with a capital base of £3 million, made up of a portfolio of investments in six high technology companies with interests ranging from metallurgy to electronics and telecommunications. In most cases, it takes only a minority stake in these companies but in the case of Data Dy-



New products are needed to get the company into growth markets, but paper tape punches will have to go.

same VDU, but in a highly customised version.

Price explains how Innotech looks at synergy potential between the companies in which it has a stake. "We do not look for complete start-ups. The companies which we take an interest in have to be at the 'next stage' as we call it, where they need that little push to take off.

"We insist on board representation and install our own financial controls and disciplines. We do not demand too many details because these companies are not in the business of producing reports for Innotech, but we ask for the minimum amount of information needed to satisfy us," he said.

The company's Zip range of printer terminals is a mature product line which keeps the cash churning around, but new products are needed to get the company into growth markets and Stabler envisages launching the next Zip generation in three to six months' time. Meanwhile, paper tape punches will have to go.

"We are just as capable now of launching a successful product as we were when we launched the Zip range, which was one of the first on the market to use microprocessor control," Stabler concluded.

In the meantime, erasable ink pens have been banned by Data Dynamics.

namics, says Price, it broke the rules because receivers are not interested in share deals.

"We are not just a provider of money. We put in a mixture of equity and loan capital as well as management support," he says. Price insists that no customers have been hurt - only suppliers.

Data Dynamics has a chequered history. Set up in 1966 as an X-bridge-based manufacturer of teletypes, printers, terminals and data preparation equipment, the company expanded by buying up a data prep bureau called Dynamic Data some eight years later.

This was to provide an extension to the engineering department, allowing it to focus on ergonomics aspects of data entry as well, and to change direction by branching out into data prep services.

The company had also been active on the European mainland. In 1968, it set up Teletype in Germany to get into the European telecoms market. However, the French would not buy from the Germans, so one year later yet another company, called Periphérique, was set up.

"This proves that the only thing common about the Common Market is a common desire to be different," says Chris Stabler, managing director of Data Dynamics - both the old and the new.

Expansion continued apace into Switzerland with the formation of a company called Teledynamics, followed by Teletype in Holland, then by Data Dynamics in Spain.

By 1979/80, the company had a group turnover of £10 million. The first crisis had struck in 1977 and Data Dynamics had to sell off the two Teletype companies in Germany and Holland, and a new German company called Teledynamics was formed.

When the receiver came in in November 1981, he sold off Teledynamics to Data Type Terminals, a company set up by ex-Data Dynamics employee Gerry Tufts in 1978. Another part of the company, Data Dynamics Services, was sold off to an employee, Don Hafford.

The company's crisis reached a peak in April this year when its accountant, Leslie Oaten was jailed for 18 months for forging cheques worth £39,500. A result of this was redundancy for 50 employees.

Stabler had called in the police in October 1981 when he realised that Oaten had been writing cheques with a ballpoint pen which used erasable ink, substituting his name with that of a credit card company after Stabler had signed the cheques.

At the time of Oaten's conviction, Stabler said: "I found out quite by chance. It surprised me that his method was so crude. He had been sent away on courses to do with computer systems security against fraud. I would have thought he would have come up with something more sophisticated and more difficult to detect."

The bank lost confidence in the company in view of the fact that Oaten was the chief accountant, called in an overdraft and appointed a receiver. Stabler is now trying to get over the ravages of his experience.

One of the companies in which Innotech has a stake is a telemetry and communications outfit called ATS. Data Dynamics will supply a visual display unit manufactured by ATS for telecommunications applications. ATS will also sell the



Ex-Data Dynamics employee Gerry Tufts bought part of the company.

BOOKS



"Can we swoop this for free ice-creams for a year?"

Teach Yourself book gets right to the point

Computer Programming in Cobol. Melinda Fisher. Teach Yourself Books. Hodder and Stoughton 1982. £2.95.

TEACHING yourself Cobol today would be a bit like learning to make fire by rubbing two sticks together, were it not that most of the data processing world is committed to the language like a prisoner to a cell.

However, there was a shortage of cheap and readable paperbacks on the topic and, although no one can really become a programmer by studying a textbook, no doubt plenty of beginners will be enabled by this to get into the subject and a number of old hands will be pleased to have a lightweight reference work close to the elbow.

Melinda Fisher had practical experience in the industry before moving on to head ICL's teaching team. Her English is simple and clear; and she gets right to the point.

Having at page one assumed no previous knowledge she takes us on by page 28 to discuss verbs. Quizzes are thrown in to make sure the reader has been paying

G.B.

Gulf between thinker and thinking doer

Machine Intelligence and Related Topics. Donald Michie. Gordon and Breach.

DONALD Michie is an example of that odd phenomenon of our age, a communicating thinker. He writes provocatively, with panache. He often achieves success in presenting the weighty in a way these uninhibited in the ways of artificial intelligence can understand.

But remembering the BBC programme in which it was pointed out that Michie's model expert system did not work, or rather did not perform a useful task at an economic cost, one is reminded of the flaw in the thinker's world.

Michie's book is described as an information scientist's weekend book. This is an engaging form of self-deprecation, which does not always succeed.

It is well written, engaging, even if it suffers slightly from the intensity of Michie's own perceptions, and from the sheer information density of the topic.

He leads into the subject by recounting a little of the life and work of Alan Turing, the theoretic-

K.C.

Lawyer's guide bridges the knowledge gap on computer evidence

The Computer in Court. Alistair Kelman and Richard Sizer. Gower Publishing Company. £14.50.

COMPUTER evidence will become increasingly important in the future, as the spread of automation decreases the likelihood of a human witnessing crime such as fraud or theft.

This means that lawyers will have to learn special techniques for examining expert computer witnesses to highlight flaws in computer output, and computer users must ensure that systems provide information that is valid in a court of law.

This book aims to bridge the knowledge gap and is the culmination of several years' work by the authors: Alistair Kelman, a barrister well-known in computing circles, who specialises in copyright law, and Richard Sizer, who is chairman of the Professional Advisory Committee of the British

Computer Society and a member of its Professional Board.

Although the book is supposed to be a guide for both lawyers and computing professionals, it is weighted more heavily towards the legal profession, spending more time on explaining computing than the law.

It concentrates on potential problem areas such as establishing the admissibility of computer evidence, showing areas where errors could invalidate results pertinent to a legal case, which helps to keep the book short and good for quick reference.

Chapters Four to Seven cover an imaginary trial of a character called Grapefruit Sorbet, accused of theft of groceries from his employer, Cornet Supermarkets Limited. Prosecution evidence hinges on output from the supermarket's Kamikaze DDB7 computer and Mr Honey-Bunny, defence counsel, sets out to prove that a dubious

order processing system, developed by a programmer named Cherry Cheesecake, had given Sorbet the oysters, Champagne and caviar he is alleged to have stolen.

Aspects of the court case are analysed in Chapter Eight, and the authors go on to suggest some guidelines for the future, including the draft of a seven-statement affidavit that computer personnel could swear to confirm the validity of a computer printout.

While this is an extremely readable and informative book, the authors may have gone slightly overboard on the court case section, which they clearly enjoyed writing. There is a danger that informative content may be trivialised by a flippancy approach.

Despite this, however, it is still a very useful book packed with valid information for which there is a growing demand.

M. McL.

Intensive parallel processing

Parallel Processing Systems. Edited by David J. Evans. Cambridge University Press. £21.00.

COMPARED with the body of knowledge and experience relating to serial, von Neumann type computers and their operations, information on parallel processing borders on the non-existent.

This work is a summary of the intensive course in parallel processing given at Newcastle University in September 1980.

It is succinct, clear, fascinating but in places all too predictably complex.

With at least one Japanese micro company determined to introduce a desktop array/parallel processor, and machines like the ICL Perq becoming increasingly common, no good analyst or programmer should be without a working knowledge of this topic.

Professor Evans' compilation is a thoroughly useful, if advanced, starting point.

K. C.

The Exhibition reaching people building with microcomputers

MICROSYSTEMS'83

West Centre Hotel London SW6
February 23-25 1983

Microsystems is the major event for engineers, designers and technicians using and building with microcomputers.

It is a unique opportunity for you to demonstrate your product or services to the vital core of the microcomputer market - the senior designers and engineers who buy micros, peripherals and components to build into systems; who use them in process control or product applications; or who are active in research and design engineering. There is no opportunity in the year like this one for identifying and contacting your prime prospects.

Find out how exhibiting at Microsystems '83 can work for you by completing and returning the coupon now to: The Exhibition Manager, Microsystems '83, IPC Exhibitions Ltd., Surrey House, 1 Throwley Way, Sutton, Surrey, SM1 4QG.

Please send details of exhibiting at Microsystems '83 to:

NAME _____
POSITION IN COMPANY _____
COMPANY _____
ADDRESS _____
TEL _____

Microsystems '83 is a Computer Weekly show also sponsored by Systems International, Practical Computing, Your Computer, Computer Talk, Office Systems, Software and Microprocessors & Microsystems, and organised by IPC Exhibitions Ltd.

Have you booked your stand yet at the Peripherals Suppliers Exhibition '83 - You should have done if you are a supplier, distributor or support company with a major interest in selling, marketing or manufacturing computer peripheral equipment



February 2-4, 1983
Cunard International Hotel
London

STANDS
RAPIDLY
BEING
ALLOCATED

Peripherals '83 will be bigger and better than ever before. For further information about exhibiting, complete and return this coupon NOW!

Return to: Ian Hardman, Advertisement Manager, Systems International, Quadrant House, The Quadrant, Sutton, Surrey, SM2 9AS.

Name _____
Position in Company _____
Company _____
Address _____
Telephone _____



MARKET PLACE

CONTACT XENIA WHITE—FOR ADVERTISING RATES **TELEPHONE: 01-661 8671**

Computers certainly take a load off your mind, until they fail!

A fast and reliable parts and maintenance service for your DEC™ based computer system is just as much a necessity as the computer itself.

SK Computer Systems (Maintenance) Ltd provide:-
 • On-call fully trained Engineers.
 • Per-Call Service at competitive rates.
 • A Contract Maintenance Service.
 • In-house repair facilities.
 • 4 hour or next working day response. Specialist Computer Removal Service.

SK Computer Systems (Maintenance) Ltd hold a comprehensive stock of spares and can service and repair a wide range of DEC™ and compatible equipment.

SK Computer Systems (Maintenance) Ltd. On-line to meet your Computer's failure!

*DEC is a trademark of Digital Equipment Co. Limited

SK
 Computer Systems (Maintenance) Limited
 Unit F
 Pixmore Ind. Est.
 Pixmore Avenue
 Letchworth
 Herts SG6 1JJ

Tel: Letchworth
 (04628) 78331
 Telex:
 825647 SKSYS G

CIT 101™
 The VDU for DEC users.



SR4
 System Limited, 1111 Hanger,
 447 High Road, North Finchley,
 London N12 0AZ, England
 Tel: 01-435 2011 Telex: 8952836

Standard Features

- VT100™ Compatible E.A.V.O.
- Printer Port, Independent Bidirectional FIA or 20Ma L.F.F. 15ft Cable.
- Green or Grey Screen
- Options
- Tektronix 4010™ Compatible
- Slave 160 cps Printer

Perfectly matched to your needs
SYSTEK
 SYSTEMS ARCHITECTS

LEASE SALE PURCHASE MAINTENANCE of all IBM Systems

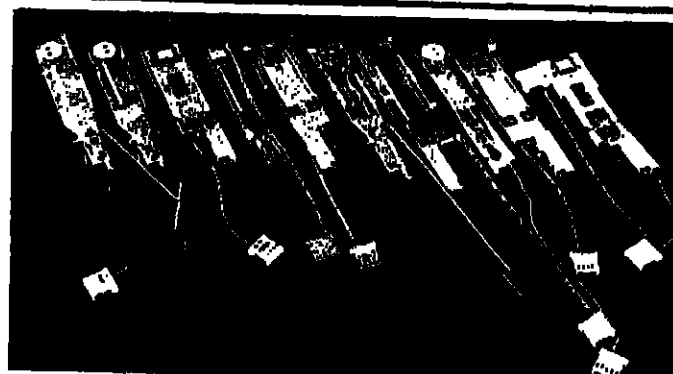


PREMIER COMPUTERS
 3 Union Court, Richmond, Surrey TW9 1AA
 Telephone 01-940 1134 Telex 926734



PRODUCT LINE:

- ★ NEW & REFURBISHED MAGNETIC HEADS
- ★ AIR FILTERS
- ★ DISK DRIVE REPAIR MEDIA
- ★ Ampex, CDC, Caelus, Calcomp, DEC, Diablo/DRI, Data General, ICL, HP, Iomac, Memorex, Pertec, Wangco, Xerox, IBM



C.D.C. DISK DRIVES AND THE 9334 MATRIX PRINTER

Vas Computer Parts & Accessories Limited

44 Masons Hill, Bromley, Kent **01-464 7227 Telex: 896559**

BUYING SELLING LEASING?

COMPUTER RESALE BROKERS
 CRB House 33 Church Street
 Basingstoke Hampshire RG21 10Q
 Telephone (0256) 55431
 Telex: 858049

CRB
 ANIJA COMPANY

USA MODEMS

To telecommunicate to North America. Buy our new generation Bell 212A, 1200 Baud, Anytone, for duplex modem. Original answer and auto answer
2450
 Fast delivery
 Tel: Sue Hadley, 01-761 3815

Top Quality Computer Furniture at competitive prices

J.J. Blow manufacture a range of tables and trolleys to complement any computer room. Contact us for leaflets, prices and literature available.
 J.J. Blow Ltd, Dept C.W., Oldfield Works, Chatsworth Road, Chesterfield S40 2CL. Tel: Chesterfield (0246) 79000.

IBM S/34 REQUIRED

IBM 8340 64KB Memory
 27MB Disc and 20 Diskette
 3 Terminals IBM 5251
 Printer (preferably IBM 5224)
 Complete configuration must be under service contract with IBM

Rosenthal Technik Great Britain Ltd
 Colyton, Devon. Telex: 42881

SILICON GLEN LTD
 Buy Trade Sell Repair Upgrade Data General Hardware

Stocking new and second-user DG equipment including Nova 4 and C330, new CDC 92180 streamers and 8730-180MB Winchester, Spectra Logic controllers
 Blackford Lodge, Blackford, Perthshire
 Tel: 076482 516
 European Agents for

digital datacom

BURSTERS DECOLLATORS COMPUTER EQUIPMENT
 FORMS HANDLING SPECIALISTS
 NEW EX. DEMO - 2nd USER
 ALSO
 V.D.U. DESKS
 FIRE SAFES
 WASTE TUBS
 ACOUSTIC COVERS
 UNIT 2, CHURCH STREET, CHESTERFIELD, DERBYSHIRE S40 2CL
 Tel: 0246 79000

MARKET PLACE

IBM PERSONAL COMPUTERS EX-STOCK MICROLAND
 Phone for demonstration in YOUR office
0428 53918
0428 3736

PRODUCT UPDATE

GET MORE PAY LESS TRY THE ALTERNATIVE

Now VAS can offer you The Alternative Head featuring 5330 high reliability slider technology. This "head of the future" is designed to be electrically and mechanically compatible for C.D.C. drives. Since its introduction over 20,000 have been sold. So try The Alternative Head. You'll get more and pay less.

VAS long ago established itself as the foremost independent supplier of Magnetic Heads, Air Filters and Magnetics Media. You can now obtain on very quick delivery 80MB and 300MB Storage Module Drives, 32, 64 and 96MB Cartridge Module Drives and the C.D.C. 9334 Matrix Printer.

For price and quick delivery phone:



THE ALTERNATIVE

VAS Computer Parts & Accessories Limited
 44 Masons Hill, Bromley, Kent
01-464 7227 Telex: 896559

NEW/USED COMPUTER EQUIPMENT BUY OR SELL THROUGH WDP

SAMPLE UNITS AVAILABLE FOR SALE:

IBM 3742/3741's all regular features complete with MAG's
 IBM Series 1 Model 5, 128K 4000 Data 1602-11 Printer, VDU etc.
 Data Products 2200 600 L.p.m. Printer/Dec VT52 VDU RS32 or 20 MA
 I.L. 811 VDU/line proof etc, 8000 Mag Disc capacity
 IBM 6250/20 Card Punches/Dec 1701/1710 Card Punches
 Tally 1612 Printer, NBR. As new - Computer Room Modular Flooring
 IBM 3348 Data Modules - Newbury Labs. VDUs 7004/8s, 7008/8s
 System 0000, 3000, 1000s, etc. - most manufacturers systems available on request

NEW DE LUXE 80 COLUMN HAND PUNCHES (EX-STOCK)



WDP
01-484 8011
 TELEX 896559
 WEBSTER D P SERVICES LTD
 65 WIDMORE ROAD, BROMLEY
 KENT BR1 3AA

DATA GENERAL

We will buy, sell, install and maintain DG equipment throughout mainland UK.

Available immediately USED

6053 VDU's £900
 Nova 3 CPU's £2000
 20 MB Disc Sub-System £5900
 ULM5's £1100
 Eclipse and Nova Memory
 Contact: Julia Ames **01-633 9577**

Cable & Wireless UK Services Ltd.
 83 Blackfriars Road, London SE1 8HA

Dealers welcome

C.D.S.

FOR THE SATISFIED CUSTOMER

• COMPUTER SYSTEMS

• COPIERS

• FAXES

• TELETYPE UNITS

• AUTOMATIC DESKTOP

• COMMUNICATIONS

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

• ...

DO YOU USE AN APPLE SYSTEM IN YOUR BUSINESS?

LOOKING AFTER IT IS OURS

Telephone for a quotation on your system

C.D.S. COMMERCIAL DATA SYSTEMS LTD.

"ON-SITE" MAINTENANCE SERVICES

Specialists in the maintenance of Apple Computer Systems, including: Curves, Elean, Vasek, Curves, Anadex, Paper Tiger, Epson, Centronics, Doc, Oki, Neo

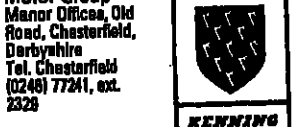
SOUTHERN AREA SALES
 TELEPHONE: 0208 710292
 Downham Road, Ramden Heath
 Billerica, Essex CM11 1PU

NORTHERN AREA SALES
 TELEPHONE: 0706 218090
 Bacup Road, Rawtenstall
 Lancashire BB4 7PA

FOR SALE

IBM 3741 Model 2, Communication, Check Digit Verification, with or without IBM 3716 printers.

Contact Mr G. Freeman, Kenning Motor Group
 Manor Office, Old Road, Chertsey, Surrey, Middlesex, TW20 1JH, Tel: Chertsey (0448) 7741, ext. 2329



£1,650

Ai ABC-26 Micro

64K 8-inch dual floppy disc drives. Purchased and used only until June. Perfect condition. Cost new £4,000.

Only £1,650 o.v.n.o.

Richard Cox
01-853 6444

TRIDENT T25

2 drives plus packs and cabling. Approx. 50 hours use. £2,500.
 Plus 100 Controller for T25 if required. £500.

Tel. 0386 48854

WANTED IBM/CL REDUNDANT/OBSELETE COMPUTERS

Raybold Computer Services, Unit 12
 Westfield Industrial Estate,
 Bpitol Road, Malden, Essex
 Tel: Malden (0621) 84888

FOR SALE

1) T.I. Model 880 DK10 Operating System Release 3.

2) 8 x Model 911 VDU's.

3) 2 x Model 610 Line Printers.

4) 2 x D580 Disk Drives - 50 mega-bytes each

5) 1 x Model 979A Magnetic Tape Drive 1600 Spt

Contact: G. Donne Computer Ltd
01-467 7635

WANTED

Used Apple equipment and associated peripherals, e.g. Printers, Disk Drives, Interface Cards, etc.

Contact Box No. 1234

EOB LIMITED
 Telephone: 0783 44777
 Telex: 837768

Electronic Brokers DEC SALE
 All items reconditioned unless otherwise stated

WORD PROCESSORS

SPECIAL PURCHASE OF THE BEST-SELLING DEC WS78 WORD PROCESSORS

★ VT78 32KB Video Data Processor

★ RX01 Dual Floppy Disk Drive

★ Diablo Letter Quality Printer

★ Maximal in mobile unit with storage cupboards

★ Includes complete WP software package

ONLY £495

DISK DRIVES

RX1150/RX01 - Unibus CU £895

RX1150/RX01 - LSI CU £895

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

RX01 - LSI CU £1450

APPOINTMENTS

Computer Weekly
Classified Department
Quadrant House
The Quadrant
Sutton, Surrey SM2 5AS
Tel: Direct Client Sales
01-661 8080
Consultancies Sales
01-661 8787
Telex: Comweek 882084 Blapre G

Direct client sales
Telesales Manager
Shobhan Gajjar
Field Sales
Manager
Mike White
Consultancies Sales
Assistant manager
Julie Hanneford-McInally

Regional Offices
Birmingham/Bristol
Via Sherat
021-366 4838
Manchester/Glasgow
Owen Kelly
081-872 8861
Production
Steve Lever
01-661 3104

General copy deadline
3.30 pm Monday prior to
Thursday publication
Top Jobs deadline
4 p.m. Friday prior to
Thursday publication
Colour deadline
4 p.m. Friday prior to
Thursday publication

Rates
£31 per a.c.c.
Quarter page
Half page

(19cms x 3cols) £1400
(18cms x 7cols) £2320
(38cms x 3cols) £2210
(38cms x 4cols) £2700
(38cms x 7cols) £4350

Box nos. £5 extra. Address back to c/o Computer Weekly, Classified Dept., Quadrant House, The Quadrant, Sutton, Surrey, SM2 5AS

CONTRACTS

IBM COBOL CICS DL/1 URGENT S. LONDON
IBM COBOL DL/1 V-SAM URGENT S. LONDON
IBM COBOL VM/CMS URGENT SURREY
IBM COBOL CICS JAN START SURREY
HP3000 IMAGE/QUERY URGENT KENT
IBM COBOL ADF IMS DB/DC URGENT S. LONDON
IBM COBOL IMS DB/DC URGENT S. LONDON
IBM PL1 IMS DB/DC URGENT LONDON
IBM VM ASSEMBLER URGENT S. LONDON
IBM VM ASSEMBLER URGENT S. LONDON
IBM SYSTEM PROG CICS PL/1 JAN/FEB START
IBM IMS DB/DC +/- ADF +/- MARK IV URGENT MIDDLE EAST

(1089)



For further details contact NIC POLAND TLP
A division of Tate & Lyle Industries Ltd.
Leon House, High Street, Croydon CR9 3NH
A member of the Tate & Lyle PLC Group

Telephone
01-686
5656

FREELANCERS - JOIN THE T.E.A.M. OF THE 80s

URGENT CONTRACTS FOR CALIBRE PROFESSIONALS INCLUDE THE FOLLOWING:

OPERATORS - U.K.

IBM OS/MVS
Data 100 and/or PDP 11
IBM Operations Analysts

OVERSEAS - HOLLAND

ADABAS DATABASE - All levels
DEC/VAX FORTRAN
DEC/PDP11, MUMPS
Any Hardware SYSTEL
HP3000 COBOL
HP3000 SPL
HONEYWELL 8 or 86 COBOL (also in Germany)

MICRO/MINI SPECIALISTS

We have a number of opportunities for people with experience in either a commercial or military environment with any of these skills:

PASCAL CP/M ALTOS
CORAL PL/M MOTOROLA
ASSEMBLER RTL2 PHILIPS
ADA UNIX INTEL

Assignments U.K. and OVERSEAS especially in the area of AUTOMATION TECHNOLOGY.

ICL

We require any combination of the following skills at all levels from PROGRAMMERS TO DATABASE DESIGNERS/PROJECT LEADERS.

VM2900 ME29 COBOL
VME/B TP FORTRAN
DEM and/or VME TPMS S3
CME TPS SYSTEM 26, ASSEMBLER

★ ANY IDMS or IDMSX EXPERIENCE ★
Assignments of various locations in UK, CANADA, HOLLAND, MIDDLE EAST and SOUTH AFRICA

IBM

IBM SERIES 1, EDX and/or EDL
IBM SYSTEM 38 RPG III
IBM 8100 DFPX or DPCX COBOL
IBM COBOL, CICS and DL/1 ANALYST/PROGRAMMERS
IBM COBOL with IMS DB or DC
★ We always require DATABASE AND SYSTEMS PROGRAMMERS ★
Various locations, U.K. and Overseas

U.K. - OTHERS

DEC VAX COBOL
UNIVAC 1100 COBOL
UNIVAC 1100 COBOL, DMS and/or TIP
HP 3000 COBOL
DEC PDP11, RSX11D or RSX11M
CMC REALITY BASIC
★ ANY TANDEM EXPERTISE ★

★ ALL CONTRACTORS ARE OFFERED:
★ SHORT OR LONG TERM ASSIGNMENTS!
★ TOP RATES! ★ A PERSONAL SERVICE!
★ PROMPT PAYMENT! ★ JOB SATISFACTION!
If you are available within the next three months, take your opportunity to join us and contact



TECHNICAL
ENGINEERING
ADMINISTRATION &
MANAGEMENT SERVICES

Team House
Snowdon Rd, Middlesbrough, Cleveland TS2 1EZ
Tel. 0642 222941. Telex: 587865 or 58148 (Agy N298) (2018)

RPG2 PROGRAMMER

Required for twin IBM System 34 installation in North Hertfordshire.

Applicants should have a minimum of one year's RPG2 programming experience, preferably on System 34. An appreciation of MAAPICS software would be advantageous though not essential.

Please write initially to: Mr. R. P. Farr, Director of Personnel, Shetkote and Drewry Ltd, Icknield Way, Letchworth, Hertfordshire SG6 1EN.

National Sales Manager
£20,000 package
plus car & no upper limit on earnings

National Sales Executive
£17,000 package
plus car & no upper limit on earnings

Timesharing/computer
services salesmen

Move over to microcomputer/telecommunication products for more excitement, earnings and career potential.

Our client is a rapidly growing microcomputer and telecommunications company who have already proved themselves in Times 100 accounts. If you are an experienced and successful computer services salesman, or have other relevant experience, join one of the highest quality sales teams in the UK selling solutions to large companies with the very latest technology at your disposal.

A national sales manager is also required for this growing sales team.

In the first instance please send your cv to Eve Warshaw at Bliss Lancaster, 2 Tavistock Place, London WC1H 9RA.

All replies treated in strict confidence.

HOLLAND

LONG-TERM CONTRACTS
IBM FORTRAN/TSO EXPERIENCE
NEW YEAR AND FEBRUARY 1983 STARTS

PLEASE CONTACT:
JOHN GARRETT OR PETER NEWTON
PROLOG SYSTEMS LTD
BEAUMONT HOUSE
177 ARTHUR ROAD, WIMBLEDON PARK
LONDON SW19 9AE

01-847 9811

prolog

TOP JOBS

COULD YOU TAKE IT BY THE HORNS?



PROJECTS MANAGER to £14,000 plus car Rural Berkshire

Once upon a time, it was not unusual in D.P. to hear of highly successful and profitable companies who were just beginning on the path of computerisation - a path that would provide senior professionals with the challenge that building real systems, and building them from scratch would provide.

Alas, such a challenge is a rare thing today. Unless, that is, you are ready to join SavaCentre Limited.

SavaCentre is a 7 year old company, with a £200 million turnover, which was set up and is jointly owned by two of the major forces in retailing: British Home Stores and J Sainsbury.

SavaCentre is now embarking upon an intensive campaign of computerisation, and therefore wish to appoint a Projects Manager with exceptional talents to initiate and lead a number of projects related to systems development.

The person appointed will have an enviable reputation for successful project implementation in either a

Retail Trading or Accounting environment, and must be conversant with the latest systems development techniques on IBM central mainframes.

The position offered has outstanding career potential within a young, go ahead and expanding department.

For further details and an application form please telephone or return the coupon below. Initial interviews can be held up to 8.00pm each evening, and on Saturday mornings by appointment.

Please send an Application Form and Company Profile to:

Recruitment Consultants 0148

Surname _____
First names _____
Full address _____
Home tel: _____ Ext. _____
Work tel: _____

RJB MANPOWER SERVICES LTD.
FREEPOST 24, London W1E 5JZ.
Telephone: 01-439 8591 (24 hour answerphone)

SavaCentre
A BHS - SAINSBURY JOINT VENTURE (2010)

PANSOPHIC SYSTEMS (UK) LTD
require

SYSTEMS SUPPORT CONSULTANTS

Package to £16K including car LONDON

To consolidate our growth we are seeking experienced professionals whose duties will be to provide pre and post sales support and customer training in all our products.

Applicants should have a minimum of 4 years IBM mainframe experience, experience of a high level language (COBOL/PLI) and of DOS/OS operating systems, probably gained in operations, applications programming and systems programming environments.

Knowledge of our product range (EASYTRIEVE/PRO/grammar/PANVALET/PANEXEC/PANAUDIT/OWL/MISOL) would be an advantage.

Please write enclosing c.v. to: Dick Moore, Pansophic Systems (UK) Ltd, Alpha House, Wythenshawe, Manchester M22 5RG. Telephone: 061-436 1415

Applications should be received by 31st December and interviews will be held in London in early January. (1010)

PANSOPHIC
Discover the Source of Software Solutions

CONTRACT PROGRAMMERS
RPGII, IBM S/34
2-3 years' experience
BRISTOL
Mid-Jen. for 2-4 months
Excellent rates

APPLY TO: RECRUITMENT AND MANAGEMENT SERVICES
Tel: Bristol (0272) 274468 (1002)

BOX NUMBERS
Box number replies should be addressed to:

See Computer Weekly Classified House
The Quadrant, Sutton, Surrey SM2 5AS

SOUTH OF SCOTLAND ELECTRICITY BOARD

COMPUTER TECHNICAL SUPPORT

Communications
Up to £15,000 per annum

The SSEB utilise an ICL dual 2872 computer installed in its Management Services Department in the South side of Glasgow.

A senior person is now required in that Department to supervise a small expert team involved in supporting data communications, transaction processing and data management software. Ideally, applicants should have a knowledge of the VME operating system, filestore management and superstructure products with particular reference to TPMS and MAC. A detailed understanding of communications hardware and software would be an advantage.



Application forms, obtainable from Chief Personnel Officer, Cathcart House, Spean Street, Glasgow G44 4BE (quoting reference 27/88/82) should be returned by 6th January, 1983, together with a full cv of technical experience. (1088)

URGENT CONTRACTS

HP 3000 (Image query) JANUARY
280RM 5802 EXPERT NOW
DCA VM 8000 FORTRAN (Salemic) NOW
VAX/FORTRAN/TOTAL JANUARY
PL1 IMS - VARIOUS JAN. STARTS
UNIVAC 1100 COBOL JAN./FEB. STARTS
VAX CORAL 66 NOW
IMS (DB) TSO COBOL JAN./FEB. STARTS

MONTREAL ASSOCIATES (SYSTEMS) LTD.
01-563 2944 (4 lines) (Emp. Agt.)
98-100 HIGH ROAD, ILFORD, ESSEX, IG1 1DS (2007)

COBOL PROGRAMMER

with experience in Designing/Writing Accounting/Stock Control.

Applications required, salary negotiable dependent on experience.
Telephone: 01-361 9006 (2020)

TO ALL OUR ADVERTISERS

The first issue of 1983 will be published on January 6. Copy deadline is Friday, December 31, at 4.30 p.m. - full artwork can be accepted up until 10.30 a.m., Tuesday, January 4. To book space telephone:

DIRECT CLIENTS: 01-661 8080
CONSULTANCIES: 01-661 8787

We at Computer Weekly would like to wish all our readers and advertisers a happy Christmas and a prosperous New Year.

CAD/CAM RESEARCH AND DEVELOPMENT
WITH



CALMA is a world leader in the design and manufacture of Computer Systems for Design Applications.
Featuring powerful Interactive Graphics and Design software, CALMA's fully integrated systems are used for integrated Circuit and Printed Circuit Board design in Cartography for general purpose and utility mapping applications, and in a broad spectrum of 3D mechanics and process plant industries for CAD/CAM applications.

An additional SOFTWARE ENGINEER is now required to work on Microelectronics Research and Development.

The main qualifications for this position is HND or Degree in Electronics/Electrical Engineering, Physics or Computer Science.

A minimum of two years' relevant experience is required for the SOFTWARE ENGINEER vacancy.

The Design Tools will be implemented in PASCAL on VAX/APOLLO hardware.

Experience of CAD-type programming, IC layout Electrical/Layout design will be valuable.

Salaries will be in the range of £9,000 to £11,000 depending on age and experience.

When applying for the above positions please quote Ref: PMD at the top of the letter.

Benefits for all the above positions include a company pension scheme, BUPA, life assurance and a relocation package where appropriate.



Beech House, 37/39 London Road
Cambridge, Surrey GU15 3HN
Telephone: Camberley 862621 (1096)

PROJECT LEADER TOY DISTRIBUTION SYSTEMS

We are urgently looking for a person to take charge of a worldwide real time toy distribution project. Experience in large scale distribution and vehicle routing systems would be ideal, however, candidates must have the following:

- ★ A liking for large furry animals with horns
- ★ No fear of heights or enclosed spaces
- ★ A jolly laugh and portly physique

The successful applicant must be prepared to travel extensively and to work to very tight schedules. Among the benefits of the position are extremely long holidays and a free uniform. We are also interested in hearing from small people with pointed ears for a short contract in manufacturing projects.

Interviews will be held at the North Pole. Applications including a short, fat résumé should be sent to Box 1237, Computer Weekly, etc.

A VERY MERRY CHRISTMAS AND HAPPY NEW YEAR TO ALL OUR CUSTOMERS AND EVERYBODY ELSE.

RB Advertising Design, Consultants in Recruitment Advertising in the Computer Industry.

THE Comac CONTRACT

IDMS
NEW DEVELOPMENT
PROJECT IN HOME COUNTIES
REQUIRES FOLLOWING STAFF
ICL VME IDMS ANALYSTS
ICL VME IDMS SOFTWARE SUPPORT
ICL VME IDMS SOFTWARE SPECIALIST
VME IDMS Database Designers
VME IDMS Cobol Programmers

IBM
MVS TSO/SPF PL1 Programmers NOW
OS/VS1 or MVS COBOL Programmer JAN.
8100 DPPX COBOL Programmer NOW
DOS VSE VM Cops Analyst/Programmer JAN.
System 38 RPG III Programmer/Analyst NOW
IBM DOS VSE CICS Power COBOL Programmers NOW
IBM 4341 DOS VSE JCL Operations Support Staff NOW
IBM 4341 VM CMS DOS VSE Systems Programmers

OTHER
CORAL 66 Programmer Various NOW
UNIVAC 1100 Executive 8 COBOL Analyst/Programmer NOW
T1 990/12 DX 10 COBOL Programmers JAN.
T1 9900 FORTRAN Programmers NOW
CMC reality Basic Programmers NOW
PRIME COBOL Programmers JAN.
VAX VMS COBOL Analyst Programmers
Level 6 GKOS TPS Brussels and Midlands
Argus OSL 55 CORAL 66 Programmers NOW
Micro 8086 CORAL 66 Programmers NOW
WANG VS COBOL Programmers NOW
ICL
2900 VMEB COBOL Programmers NOW
ME 29 COBOL Programmers NOW

Phone Mike, Jessie or Claire
We have a reputation for moving quickly and efficiently so for an informal chat telephone us today or send your c.v. as soon as possible.

Comac
COMPUTER APPOINTMENTS
& CONTRACTS
27 TOWN CENTRE, HATFIELD, HERTS.
Telephone Hatfield (07072)
65699 or 69889

OVERSEAS ICL Programmers and Analysts

P-E Computer Services Limited is prime contractor and the largest supplier of outside DP resources to Kuwait's premier oil and petroleum company.

We require further programmers and analysts with experience of large ICL 2900 machines, VME/B and, if possible, IDMS to join our existing and well-established team.

In addition to a tax-free UK salary we provide accommodation, generous local expenses, a car allowance, free medical and dental care, personal effects insurance, travel and - perhaps most important - the security of working for a major British software house with more than 20 years experience of working overseas.

If you would like to be considered for a position in our team please write to your nearest P-E regional office enclosing a full and current cv. Appointments are single status, and generally on a six to twelve months renewable contract basis.

P-E Computer Services Limited

Park House, Wick Road, Egham, Surrey TW20 0HW
contact: Geoff Mackenzie Tel: (0784) 3441
Winchester House, Fountain Street, Manchester M2 2EP
contact: Peter Moore Tel: 061-228-2776
Lennig House, Masons Avenue, Croydon, Surrey CR0 9XS
contact: Paul Davis Tel: 01-680 7583

NEWCASTLE UPON TYNE POLYTECHNIC MANAGER - MICROSYSTEMS CENTRE

The Department of Industry has made funds available to ensure that Microsystems Centres along the lines of the NCC Microsystems Centre of London, are available throughout the UK. This is to be effected by setting up a Federation of Microsystems Centres supported by the DoI and administered by the National Computing Centre.

The DoI has approved the establishment of a Microsystems Centre at Newcastle upon Tyne Polytechnic as a member of the Federation which has the overall aim of providing an impartial service to the local business community in the selection and use of microcomputers.

The DoI has provided initial funding for 2 years and applications are invited for the post of Manager of the Microsystems Centre. This post is to be filled as soon as possible (a secondment would be considered).

Burnham FE PL: £11931-£13280 (bar) - £15018 per annum.

For further details and application form returnable by 7th January, 1983, please call our 24-hour telephone answering service (0632 32128) or send a stamped addressed envelope to the Personnel Officer, Newcastle upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 1ST.

GLOS CONTRACT SYSTEMS ANALYST

DEC ★ VAX experience
ABLAITIVE LTD
Bristol (0272) 877660 (2018)

Computer Auditor

£9,960-£11,031 p.a. (incl.)

Applications are invited for this new post within the Audit Section of the Financial Services Department from persons with experience, initiative and enthusiasm necessary to develop and carry out Computer Audit for a consortium of three districts (which includes the neighbouring Boroughs of Runnymede and Surrey Heath) whose full computer services are provided by Woking Borough Council. The successful applicant would be expected on occasions to report direct to the Chief Officer of the individual authorities.

In January 1983, the Council are upgrading the mainframe to an ICL 2908 and taking delivery of DRS equipment to extend the existing communications network to provide a distributed processing facility including a terminal for audit purposes. Many new systems have been implemented over recent years, including a powerful financial information system.

Applicants for the post should have a thorough practical knowledge of data processing, hold a relevant senior position and be a member of the British Computer Society. A recognised qualification in accountancy would be an added advantage.

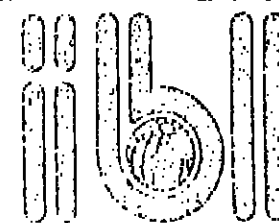
Temporary housing will be available to those in an approved area along with generous removal and disturbance allowances (together with legal fees on house purchase up to £1,500). Candidates should have transport available for Council business for which an essential user allowance is payable.

Please contact the Chief Personnel Officer, Council Offices, Woking, Surrey GU24 0AB, 04321 ext 177 for an application form and further details. Closing date: January 4th, 1983.

Further details and form of application from the Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Closing date 30 December, 1982.

**TRENT
POLYTECHNIC
NOTTINGHAM**

INTERNATIONAL BROKERAGE AND LEASING



To facilitate continued expansion, four extra telephone salespeople are required for the City and Ascot offices of this major European computer leasing company. Salary will be commensurate with experience and potential. Successful performance can lead to exclusive sales territory, company car and five-figure commission.

Knowledge of the leasing market would be useful; knowledge of IBM computer equipment is almost essential. Applicants must be prepared to work hard in a competitive business which rewards effort and application. Please apply initially to Beverley Edgar: Ascot (0990) 23344.

IBL (UK) LTD, INDEX HOUSE, HIGH STREET, ASCOT, BERKSHIRE SL5 7JF. TEL: 0990 23344. TLX: 847765

Part of the IBL Group. Other companies in Australia, Belgium, France, Germany, The Netherlands, Portugal and USA (1980)

CHRISTMAS CRACKERS!

Humberston	Cobol Programmers - any machine	to £7,900
North Yorks	Analyst/Programmer - Honeywell preferred	to £9,000
Leeds	Chief Programmer - IBM Cobol/CICS	c. £10,500
West Yorks	Systems Analysts - range of possibilities	to £10,500
Yorkshire	Project Leader - on-line retail systems	to £11,000
Leeds	IBM Cobol Programmers - CICS useful	from £7,500
West Yorks	Analyst/Programmer - IBM Cobol	to £8,500

NORTH WEST

Manchester	DOS/VSE Systems Programmer	c. £10,000 + car
Marsfield	IBM, DEC, B'GHS, HWELL, COBOL, PL/1, etc.	to £9,000+
Preston Area	IBM or ICL Analyst, Analyst/Progs, Progs	to £10,000+
Manchester Area	Analyst - Variety of interesting positions	to £11,000+
North West	Real-time Progs, CORAL FORTRAN, ASSEMBLER	to £10,000+
Marsfield	Analysts and Senior Analysts - Commercial	to £11,000
Manchester	IBM, ICL, UNIVAC, HWELL, MINIMICRO Progs	to £10,000

For further information about these superb opportunities, and an early and convenient interview appointment (over the Christmas break, if need be), ring Arnold Sampson (NW jobs) or David Swann (NE jobs) on one of the numbers below (transfer charges if necessary).

Sampson Staff FREEPOST, Manchester, M1 8DL.
Tel: Office - 061-632 4184 (24 hours)
Home: (NW) Tottington (020489) 2545
COMPUTING & ACCOUNTANCY RECRUITMENT (NE) Ripon (0765) 700068

WE WISH ALL OUR FRIENDS IN D.P. A MERRY CHRISTMAS AND A HAPPY NEW YEAR

If you have any of the following skills and are available soon call us immediately. If not, call anyway; we will do our best to make yours a prosperous New Year.

Eric Oldham and Paul Tomkins

IBM COBOL, CICS, DL/1
IBM COBOL, DL/1
IBM OS COBOL, ROSCOE
IBM OS COBOL, CICS, VSM
IBM Sys. 38 RPG III
IBM Sys. 34 RPG II
IBM PL/1, CICS
HP 3000 COBOL
TI 990 COBOL
CMC REALITY
ICL GII+, COBOL, TPS

Programmers
Programmers
Programmers
Programmers
Programmers
Programmers
Analyst/Programmer
Programmers
Programmers
Programmers
Programmers

If a permanent position suits you best, Bridget Kotchie will point you in the right direction.

Almners Priory, Almners Road
Lyne, near Chertsey
Surrey, KT16 0BH
Telephone: Chertsey
(09328) 66812
Licence No. SE806

THE ASSOCIATED EXAMINING BOARD

Programmer

Up to £8,147 (basic)

We have a vacancy for an experienced COBOL Programmer to join a small team currently engaged in the development of Database routines for the administration of public examinations. A variety of accounting routines is also being developed as part of a comprehensive programme to improve the Board's computer systems. A Honeywell Level 64/DP5 computer with a range of peripherals, OMR equipment and local communications facilities is in use for this purpose.

Applicants should have at least two years' COBOL programming experience, ideally in a medium systems environment. (Applicants having less experience would be appointed to a lower salary scale.) Knowledge of the 64/DP5 with TDS and IDS would be of considerable advantage.

The basic salary scale is £6,833 rising by six annual increments to £8,147 per annum, for a 35-hour week. There will be a considerable amount of overtime working for at least the next two years. Overtime is paid for at 1½ to 2 times the basic hourly rate. There is a contributory pension scheme and other benefits include luncheon vouchers, free car parking, 28 days' annual leave and a subsidised staff restaurant.

Application forms may be obtained from the Personnel Manager, The Associated Examining Board, Wellington House, Station Road, Aldershot, Hampshire (Tel: Aldershot 25551), to whom they should be returned, marked 'Private and Confidential', not later than Friday, January 7, 1983.

(The Board's offices will be closed for the Christmas break from midday on December 24, 1982, to January 3, 1983, inclusive.)

COMPUTER ENGINEER

A vacancy exists for a person to build digital PDP11 systems in-house and will also be required to assist in our board repair department

DEC experience is absolutely essential
Salary negotiable

For further details please contact
Lambert Computing on Maldenhead 72037

ENERGY COMPUTING ANALYST/PROGRAMMERS

£ NEGOTIABLE

The Technical Computing Division of Onstream Limited has vacancies for several Analyst/Programmers to work on a demanding technical/scientific environment.

A minimum of 3 years' Fortran experience is necessary for these senior positions, preferably gained in a minicomputer environment. The positions offer excellent career prospects within a fast expanding company and would involve some travel.

Onstream is an international project management consultancy with offices throughout the world, servicing the needs of the offshore oil/gas, petrochemical, civil and metallurgical industries.

Resumes should be sent in confidence to:

Mr. M. J. Robb
ENERGY COMPUTING
180-184 Mortimer Street
Horne Bay, Kent, CT8 5DU

UMIST

RESEARCH ASSISTANTS

Applications are invited for two Research Assistant posts in the Department of Computation. The posts are for three years and are funded by SERC. The appointees will work on the design of a program, workbench to assist with commercial program design. The computers used will be ICL Perce which are single user, high-resolution graphical machines. Applicants should have a good honours degree in Computing, or some equivalent qualification, or significant relevant experience. Knowledge of COBOL, PASCAL and the Miken Jackson program design technique will be a distinct asset.

Salary will be in the range £5,550-£11,105 per annum. Applications, quoting reference COM/147/BC, and enclosing a full c.v., should be sent to B. J. Edwards, Department of Computation, UMIST, P.O. Box 89, Manchester, M80 1QD, by January 4, 1983.

DEPARTMENT OF COMPUTING SERVICES

APPLICATIONS PROGRAMMER

(CLIFTON SITE)
£5352-£8326

The successful applicant will join the Applications team of six which is involved in writing, maintaining, installing and advising on applications programs. The post provides a focus for the team's responsibilities at the Clifton site and is involved with the daily running of the facilities at the Clifton site. The post combines approximately three days a week at the Clifton site with the remainder at the City Centre. The major languages in use are Fortran, Basic, Cobol and proficiency in using packages such as Ghost, NAG, Calccomp, Gino, SPSS, Part and Databases Systems would be desirable. The range of work covers most subject areas taught at the Polytechnic (Business, Humanities, Science, Engineering).

The ability to communicate effectively with both the inexperienced and experienced user is paramount as the Department provides a consultancy service to students and staff throughout the Polytechnic.

Further details and form of application from the Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Closing date 30 December, 1982.

**TRENT
POLYTECHNIC
NOTTINGHAM**

THE UNIVERSITY OF MANCHESTER Department of Computer Science

Applications invited for industry-supported

RESEARCH ASSISTANTS

In the above department

The posts will relate to several projects, involving system software for micro-computers and larger mainframe computers. Candidates should have a good degree and relevant systems programming experience in research or industry. Preference will be given to candidates with a specialised knowledge of the Unix operating system and/or experience of programming in C. Posts are for three years. Salary range p.a. £2,375-£11,105 (superannuation).

Apply with Curriculum Vitae and names of two referees as soon as possible to: Dr. C. J. Theaker, Department of Computer Science, The University, Manchester M13 9PL (1980)

UNIVERSITY OF LONDON INSTITUTE OF EDUCATION

PROGRAMMER B

Senior programmer required to organise and run the Institute's computing services within Department of Mathematics, Statistics and Computing. Activities include provision of introductory courses, advisory support to staff and students and development of programs. Supervision of one junior programmer and a computer operator.

The Institute is linked to several university computers via a PDP-11 minicomputer. Familiarity with Unix and the C programming language highly desirable. Experience in statistical computation an advantage. Applicants will need routine systems programming or advisory service experience. Salary within range £2375-£11,105 plus other privileges and application forms from Mary Griffin, 636-100 extension 284 or write to her at University of London Institute of Education, 20, Bedford Way, London WC1H 0AL. Closing date for consideration 14.12.82. Interview on 27 January, 1983.

CHELSEA BUILDING SOCIETY

SYSTEMS MANAGER

Chelsea Building Society with assets in excess of £320m. and 64 branches invite applications for a Systems Manager.

Salary will be paid in accordance with previous experience within the range of £8,770 and £12,760. Prospects are extremely good to progress further within the organisation. Benefits include staff mortgage scheme, private house scheme, car allowance and where appropriate relocation expenses.

The successful applicant will be located at the Society's Administration Headquarters in Cheltenham and will be responsible for establishing and running a small development team working on a Real Time, branch alternative terminal system. The Society's plans call for a person with good communication skills, both written and verbal. Drive and enthusiasm are essential and the person should be capable of working under pressure and meeting agreed deadlines.

Applicants will ideally have a sound Systems Programming background, preferably using NCR equipment. Preference will be given to applicants with NCR 3/COBOL experience. The society is currently using an NCR 8565M computer under the BRX operating system.

Please apply to:
Mrs. M. Campbell - Personnel Officer
CHELSEA BUILDING SOCIETY
Administration Headquarters
Thriestring Hall
Thriestring Road, Cheltenham, Glos., GL53 7AL
Telephone: 0242 21391



We will personally introduce you to the best positions in DP

Contract Systems & Programming

- ★ VME - Technician (Johannesburg)
- ★ ME 29, TME, TP, IDMS - Programmers (Zimbabwe)
- ★ VME 2900 COBOL, SCL, IDMS - Senior Analyst/Programmer
- ★ VME SUPERSTRUCTURE - Technician (Manchester)
- ★ IDMS, TPMS, VME/B - Systems Trialists (Manchester)
- ★ TPMS, Technical Support (Manchester)
- ★ IDMS VME/B - Technical Author (Manchester)
- ★ VME/B, COBOL, IDMS - Programmers (Bedfordshire)
- ★ DOS/VSE, CICS, VTAM - Analyst/Programmer
- ★ HP 3000, IMAGE, QUERY, COBOL - Programmers
- ★ ANY FORTRAN, 2 YEARS' EXPERIENCE (2-YEAR CONTRACT) - Programmer
- ★ T1 9900 REAL TIME PASCAL, ASSEMBLER - Engineer
- ★ LARGE BURROUGHS, COBOL, DMS - Analyst/Programmer
- ★ VAX 11/780 VMS COBOL - Programmers
- ★ SYSTEM 38 RPG3 - Programmers and Tutors
- ★ LARGE MAINFRAME - Technical Analyst
- ★ STRONG FORTRAN, MINIS, GEOPHYSICAL MAPPING - Analyst/Programmer

- ★ DOS/VSE, VM, CICS, COBOL - Analyst/Programmers
- ★ COBOL, CICS and/or DL/1 - Programmers
- ★ PL/1, IMS DB/DC - Analyst/Programmers (Scotland)
- ★ DBA EXPERT IMS DB/DC - Designer
- ★ DB DESIGN IDMS & ADS - Technical Project Leader (Midlands)
- ★ OS/JCL COBOL - Programmers
- ★ MVS, CICS, COBOL, DL/1 - Analyst/Programmers
- ★ MVS/OS, BATCH, DL/1 - Programmers
- ★ MVS/OS, CICS, DL/1 - Software Engineers
- ★ VM/DOS and/or VTAM - Systems Programmers
- ★ APL and/or MICRO BASIC & PASCAL - Programmer/Analyst (Scotland)
- ★ ICL TPMS/IDMS - Systems Designer
- ★ VME/B IDMS - Programmers (Manchester)
- ★ VME/B IDMS - Designer (Johannesburg)
- ★ MINI ASSEMBLER - Senior Programmer
- ★ REAL-TIME ASSEMBLER - Systems Programmer

Please contact LORRAINE, MERVYN or FRANK

Permanent

- ★ RPG2 PROG. & BANKING
- ★ DOS/VSE OPERATOR
- ★ IBM ANALYST/PROGRAMMER
- ★ MVS SENIOR OPERATORS
- ★ JUNIOR IBM SYSTEMS PROGRAMMER
- ★ CHIEF OPERATOR - PDP/VAX
- ★ CHIEF PROGRAMMER - HP 3000
- ★ MVS/JES2 (+ OS/VS1) OPERATOR
- ★ IBM SYS 34 SENIOR OPERATOR
- ★ IBM SYS 34 SYSTEMS ANALYST
- ★ DATABASE ANALYST - DOS/VSE
- ★ COBOL, CICS, DL/1 WITH BANKING EXPERIENCE

EAST LONDON
WEST LONDON
MIDDLESEX
MIDLANDS
WEST LONDON
ESSEX
C. LONDON
W. LONDON
MIDDLESEX
EAST LONDON
EAST LONDON

NEG.
£5,500+
to £13,000
c. £8,000
Neg.
c. £8,000
V. GOOD
£8,500
£7,500
NEG.
NEG.

Ref: 232
Ref: 222
Ref: 209
Ref: 220
Ref: 211
Ref: 230
Ref: 231
Ref: 221
Ref: 216
Ref: 233
Ref: 234

Contract Operations

- ★ MVS JCL WRITER
- ★ MVS NETWORK CONTROLLER
- ★ VME/B OPERATOR
- ★ VM/VS1 OPERATORS
- ★ SYS 34/38 OPERATORS
- ★ MVS OPERATORS
- ★ DG AOS OPERATORS
- ★ VAX/PDP OPERATORS

Please contact Mike Palman or Trevor Butterworth

KPG 01-948 5922

KPG Computer Support Services Ltd.
Cobden House, Park Lane, Richmond, Surrey TW9 2RA

Please contact JAYNE or KEITH

SENIOR COMPUTER OPERATORS

Middlesex

Experienced people are required for a multi-shift installation with an extensive network of remote users. Applicants must have worked in Operations for five years or more and be committed to a career in this area. The installation is using IBM hardware and software, but if you can demonstrate similar experience in a real-time environment using other large mainframes, please apply. The salary and benefits package are very good and professional applicants could expect an excellent opportunity to further their careers.

Contact KEITH ROWLAND on 01-948 5922 (days) or 01-399 8163 (evenings or weekends)

KPG COMPUTER SUPPORT SERVICES LTD
Cobden House, Park Lane, Richmond, Surrey

IBM SYSTEMS PROGRAMMERS & SUPPORT TECHNICIANS

West London

If you have four years' or more experience in a Technical Support role in a medium to large IBM installation and can demonstrate an in-depth knowledge of IBM software and/or Operating Systems... then call me now. We can offer you a job that will utilise your skills, stimulate your imagination, provide excellent terms and conditions to improve your current status and offer a new direction for your future.

Help support our ICL software in Johannesburgand make a sound investment for the future

Our Client, a highly respected company, with predominant interests in the mining of precious metals, is seeking to recruit suitably experienced ICL Software Personnel to work within their Johannesburg Head Office.

As a company with vast resources, they are in an excellent position to offer a rewarding return on an investment of time, experience, and commitment, and therefore a worthwhile opportunity for personal advancement can be realised.

VME Software Support

Salary negotiable

With good experience within ICL 2900 VME environments coupled with at least a 2 year exposure to COBOL and possibly FORTRAN. Duties will encompass support of operating system, and superstructure software through hands on involvement and the supervision of a small VME team. Consequently skills/in project planning and team leadership are highly desirable, as are telecomms and database experience.



TP/Database Software Support

Salary negotiable

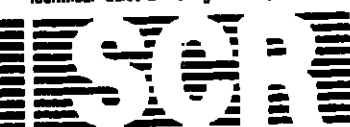
To provide an efficient support interface between applications development and technical personnel. A knowledge of COBOL and preferably FORTRAN is required to enhance a sound background in TP and Database technology (preferably IDMS and RAPPOR).

These positions hold an exciting challenge for career minded individuals and an excellent package of salary and benefits (to include bonus, non-contributory pension and medical aid) will be available. Full assistance with relocation to South Africa will be offered including 3 months initial accommodation in a furnished flat, and every effort made to ensure a happy landing at Jan Smuts Airport. Life in South Africa can be extremely rewarding, with a high quality of lifestyle coupled with reasonable living costs.

To find out more contact Graham Utton from our Advisors, SCR International on 021-236 3781 (24 hours answering service) or Cannock 3782 (evenings and weekends)

SCR International... bringing the world within your reach

Technical Sales & Management Appointments



Specialist Computer Recruitment
International Limited

MIDLANDS & INTERNATIONAL
35-37 Great Charles Street
Queensway, Birmingham B3 3JY
021-236 3781

HOLLAND
Willemsoordweg 92
1011 H M, Amsterdam
010 3120-760947

BELGIUM
Avenue Louise 327
Bote 4, 1050 Bruxelles
010 322-640 7151/71

SOUTH
James House, 46 James Street
London W1M 5HS
01-935 0671/486 0461

NORTH
International House, 84 Deansgate
Manchester M3 2ER
061-833 0427

EXCELLENT CONTRACTING OPPORTUNITIES

Our immediate domestic and international consulting needs are detailed below. If you are of a professional disposition, skilled and dedicated, and wish to join our growing permanent or contract staff, please contact us in respect of these and future opportunities.

INTERNATIONAL

Assembler, DOS/VSE
COBOL, ICL 2900, VME/B
FOCUS, RAMIS or NOMAD

Programmer
All levels
Analyst/Programmers

Paris
Kuwait
USA

U.K.

COBOL, IMS/DB and/or
DC, ADF

Programmer
Programmer/Analysts

Home
Counties;
Worcestershire;
Essex
London
Herts
Hants
Oxfordshire
London
Bedfordshire

COBOL WANG
IMS/DB
VME or MVS
COBOL, ICL ME29, IDMS
COBOL, ICL 2900, VME/B
PASCAL, T.I.
FORTRAN, BASIC, ALAO

Programmer
Database Administrator
System Programmer
Programmer
Programmer
Project Leader/
Analyst/Systems Engineer
Programmer/Analyst
Programmer
Programmer/Analyst
DP Manager
Programmer/Analyst

Cheshire
London
London
London
London

ADABAS, NATURAL
COBOL, HP3000
ASSEMBLER and/or COBOL,
CICS
RPG II 3/34, Manages
NOMAD, RAMIS, FOCUS,
and INQUIRE

Programmer
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst
Programmer/Analyst

London
Home
Counties

For more information please contact:
Group Resources Department
TANGENT COMPUTER SERVICES LTD.
102/106 South Street
Romford
Essex RM1 1RX
Tel: Romford (0708) 750201
(24-hour answering service)



UNIVERSITY OF EDINBURGH
PROGRAM LIBRARY UNIT
Two Computing Officer posts
are available, initially for one
year, one in each of the fol-
lowing areas:
**MAINFRAME PACKAGE
CONVERSION
STATISTICS/GRAPHICS
APPLICATIONS ON MICROS**
Salary probably in the range £01
(£1,550-£2,050) or £02 (£2,075-
£2,110), but might be higher for
suitably qualified candidates. Ap-
plications are welcome from in-
dividuals wishing to work part-time.
Further particulars may be obtained
from the Secretary to the University,
Old College, South Bridge, Edin-
burgh EH8 9YL, to whom applica-
tions should be sent together with
the names and addresses of two
references.
Please quote reference No. 7016.
(2222)

The University of Sheffield
MRC/ASRC
Social and Applied Psychology Unit
Research Programmer
Applications are invited for the
above post (initially for 12 Feb-
ruary 1983 for 2 years, to work with
Dr T. R. Green on an SRC-funded
project for developing programme
support for cognitive and experi-
mental psychology. The project in-
cludes a programming language,
based on the artificial intelligence
language POP-2, a Bayes net ex-
ecutor, and a small production system in-
terpreter, and is to run on laboratory
micros. Knowledge of C useful, also
some acquaintance with expert
systems, concurrent programming
or computational linguistics.
Initial salary in the range £5,500-
£6,500 a year on Grade 1b.
Details from Dr T. R. Green MRC/ASRC
Social and Applied Psychology Unit,
Department of Psychology, The Uni-
versity, Sheffield S10 2TN, to whom
applications should be sent as soon
as possible quoting reference
7068/88.
(2600)

**BOX
NUMBERS**
Box number replies should be
addressed to:
Box Number
c/o Computer Weekly
Customer House
The Quadrant
Guildford Surrey GU1 4AA

DATASCENE

CONTRACT AND PERMANENT RECRUITMENT

Wish all their clients a Happy Christmas.
Applicants, ensure a prosperous New Year
by completing the coupon below or tele-
phone:

DATASCENE INTERNATIONAL
SCEPTRE HOUSE
169/173 REGENT STREET
LONDON W1R 7FB
01-439 1856 (24 Hours)

NAME:
ADDRESS:
TEL: (HOME) (OFFICE)
MAJOR EXPERIENCE: (HARDWARE)
..... (SOFTWARE)

Have Computer-Will travel

Interesting jobs for good Computer Engineers are hard to come by nowadays and however fascinating the system you are working on, going back to the same locations can be downright boring.

It's not often that you come across a job which not only offers you a salary of up to £10,000 pa but also the opportunity to travel. So that although one week you may be servicing a system in a London airline's office, you may be installing a new one in a Middle Eastern airport the next.

We have a thirty year record of innovation for the aviation industry. Always quick to provide practical solutions for current problems, we developed the familiar electronic security gates you find in airports.

Our latest project is the LOPAC (Load Optimisation and Passenger Acceptance Control) Airport Departure Control System which provides comprehensive handling facilities.



THE HIGH TECHNOLOGY TASK FORCE
AVIATION SYSTEMS AND SERVICES
MEDICAL SERVICES
COMPUTER SYSTEMS AND SERVICES
COMMUNICATIONS SYSTEMS-WORLDWIDE
(1987)

To get the very best out of this system you need a Computer Engineer to maintain existing systems and develop and install new ones. As you can imagine, there is a huge market potential for such a system. You will be responsible for making up each individual customised model and then installing it, advising the staff who are going to use it, supporting the sales team who are going to sell it, and servicing it. Wherever.

Perhaps you already work with a major computer manufacturer. You will certainly have a City & Guilds Technological Certificate, HND or an equivalent qualification as well as practical experience of PDP 11 and a sound background in data communication and equipment maintenance.

To find out more write or phone to the Senior Recruitment Officer, IAL, Aerial House, Hayes Road, Southall, Middlesex, UB2 5NJ. Tel: 01-374 5134. Please quote Ref. K366.

SYSTEMS ANALYSTS Salary Range £9 - 11K Middlesex

Our client, a successful manufacturing company is seeking Systems Analysts to join a small team of professionals committed to the introduction of distributed processing based on DEC VAX hardware. Candidates should have a minimum of two years experience of commercial systems and the ability to achieve results quickly under minimal supervision. A wide variety of development projects are planned to provide fully interactive facilities in the financial, manufacturing and marketing areas. This existing opportunity in a small, but advanced, Data Processing Department offers a competitive salary and other excellent benefits.

Please send c.v. to:

Vivien Borrie
Bastable Advertising & Marketing Limited
18 Dering Street London W1

This post is open to both Male and Female applicants

Bastable
Personnel Services

(1986)

Freelancers...

... in the North of England and Scotland who are available now or in the near future are invited to contact me, Peter Moore, to discuss a variety of interesting and rewarding assignments throughout the UK and overseas.

P-E Computer Services Limited
Winchester House, Fountain Street, Manchester M2 2EF. Telephone: 061-228 2776
(1982)

R.P.G. PROGRAMMER Saudi Arabia

Our client is an established Saudi Arabian/U.S. venture company, situated in Riyadh.

They wish to recruit a programmer with at least two years experience on IBM System 34, using RPG 2. It is envisaged that any systems analysis experience possessed by the successful candidate could well be utilised in time.

A two year contract is offered, in addition to a tax free annual salary of around £18,000 our client is providing bachelor accommodation, food, medical cover and recreation facilities free of charge.

Write or telephone for an application form quoting Ref. S2059: Andrew Neatby Smith, Lansdowne International Limited, Lansdowne House, 36 Great Smith Street, Westminster, London SW1P 3BU.

01-222 3264
(24 hours)

Lansdowne
INTERNATIONAL RECRUITMENT CONSULTANTS

Opportunities in Health Computing

Systems Analyst- £8,490 pa - £10,323 pa
Analyst Programmers - £6,684 pa - £9,277 pa
Programmers - £5,119 pa - £9,277 pa
(pay award pending)

A proficiency allowance scheme is in operation

The Computer Unit of the Oxford Regional Health Authority is currently recruiting staff at all levels to work on a wide variety of projects which are part of an ambitious Regional Strategy for the 1980s. These include on-line hospital systems, laboratory systems, micros for GPs plus a large number of other applications aimed at improving the delivery of health care in the Region. The main equipment used is ICL (2900, ME29, 1900) and DEC PDP 11 with MUMPS.

If you are looking for a change and think you have what it takes to become a part of this team, get in touch with us now. Experience requirements range from a few months for the lower programming grades to five years or more for the analyst posts.

For further details and an application form please contact (quoting reference number V73/82):

The Recruitment Officer,
Oxford Regional Health Authority,
Old Road,
Headington,
OXFORD OX3 7LF.
Telephone: Oxford 84861 Ext. 246/266.
Closing date: 7th January, 1983.

(2008)

Oxford Regional Health Authority

Technical Automation Jobs in Holland and West Germany

BSO/Automation Technology is a software house engaged mainly in the fields of real-time process control and monitoring systems, simulation techniques, data communications, computer networks, distributed systems, computer graphics and compiler construction.

Our clients range from large international organisations, such as the European Space Agency, to small companies using microprocessors for the first time. Our work consists of projects (both in-house and on clients premises), and technical and managerial consultancy.

BSO/AT has 50 employees, half of whom are English, and is part of the BSO Group (270 employees), one of the largest in the Netherlands.

Vacancies range from:

PROGRAMMER to SYSTEMS DESIGNER
(to PND 13,000 and car) - (to PND 16,500 and car)

We are looking for people with 2 to 7 years' experience in the design and implementation of real-time industrial or scientific systems on minicomputer or microprocessor systems.

Preference will be given to applicants with a good knowledge of one or more Assembler languages and at least one of the following high-level languages: Pascal, RTL/2, Coral 66, PL/M, Fortran. Applicants who can show in-depth experience of a structured programming methodology will also be given preference.

Applications plus c.v. as well as requests for information can be directed to our Personnel Manager, Robbert J. Schaalekamp, P.O. Box 8348, 3503 RH Utrecht, The Netherlands, telephone 010-3130 911911 (please reverse charges). Our first interviews will be in London on Friday, January 21 (including the evening) and Saturday, January 22.



BURO VOOR SYSTEEMONTWIKKELING
Postbus 8348, 3503 RH Utrecht, tel. 010 - 31 30 911911.

FOR
CLASSIFIED
ADVERTISING USE
DIRECT LINES

RECRUITMENT CONSULTANCIES
(01) 661 8787

DIRECT ADVERTISERS
(01) 661 8080



+Benefits

£8,000 - £20,000 p.a.
£350 - £750 p.wk.

READ ON...

Allmand Computer Resources is a new and progressive recruitment consultancy specialising in the selection and provision of both permanent and contract personnel to banks, insurance companies and allied financial institutions.

Our clients' needs are ever increasing for well qualified data processing professionals and at present we seek numerous staff on their behalf for permanent and long term contract assignments.

In particular, we invite response from CONTRACTORS shortly available to work in London and/or the Home Counties on the development of varied financial applications, who match the following:-

An IBM background with experience of PL/1, Assembler and IMS to work in an Analytical, Team Leading or Programming capacity

An IBM background with experience of COBOL, Assembler and IMS DB/DC to work at Project Leading or Programming level

NCR Criterion experience with knowledge of COBOL, VRX, TRANPRO and TOTAL at Senior Programmer or Programmer level

NCR experience using COBOL under IMOS/IRX at Senior Programmer or Programmer level

Apple II and PASCAL experience at Senior Programmer level

Furthermore, our clients urgently seek PERMANENT staff to work in London and the Home Counties; there is particular emphasis to recruit persons with a background in IBM, NCR or DEC environments. Whether you are interested in a management, analysis or programming position, we invite you to contact us now.

You will find our CONTRACT TERMS and our clients' SALARIES/BENEFITS are VERY ATTRACTIVE.

Please respond by sending your C.V. or telephoning Barrie Frost.

Allmand Computer Resources Ltd



15/17 City Road, London EC1Y 1AA.
Telephone: 01 620 0801 (24 hr)

DoE Lic. No. 85 6663

ANALYSIS OF SYSTEMS

PROFESSIONAL ENVIRONMENT

**Central London
up to £11,000**

Our clients can give you lasting development work on a variety of applications and sizes of projects: Mainframes, minis and on-line database facilities are available to enable you to design systems in a modern, up-to-date way.

Training is given a high priority to enhance your skills and further your career development. The work involves meetings with users from inception to implementation, so those with a mature outlook who get on well with others can have a stimulating career in a well-organised department.

It is likely that you will have had several years' analysis experience, but Analyst Programmers who wish to transfer to full-time analysis are more than welcome to apply for positions starting around £9,500.

Please ring us in confidence for an initial discussion, quoting ref. 893. Alternatively, write briefly or leave a message on our answering machine after hours.

(1981)

EDP SYSTEMS 01.637
52-53 Margaret St. London W1N 7FF 5796

**Complete the coupon and return to
Effectia Gravis, National House, 66
Wardour Street, London W1V 3HP, for your
next PERMANENT or CONTRACT job, or
phone 01-439 6481 (24 hrs.).**
(BLOCK CAPITALS PLEASE)

Names (in full)

Address (Permanent)

Telephone: Home..... Office

Type of Transport..... Date of Birth

Current Position.....
(Contract/Permanent) delete

Salary/Rate

Position Required.....
(Contract/Permanent) delete

Salary/Rate

Notice Required/Date Available (delete).....

Areas Preferred: First Choice

Second Choice

Experience to date: (Last Position First)

Company Name From To Duties and
and Location Mth/Year Mth/Year experience

.....

.....

.....

.....

.....

.....

.....

.....

.....

BORED?

Ring the changes

021-622 6181 or 0532 431522

Now is the time to reconsider your position and make plans for the New Year. The first step is to ring RTC in Birmingham or Leeds for a confidential discussion on the opportunities available for **Designers** and **Programmers** with **REAL TIME** experience.

There are many exciting opportunities in both the U.K. and EUROPE during 1983 for people with good experience of **Military Systems**, **Telecommunications**, **Research** or **Industrial Process control**. In particular we want to speak to **SYSTEMS PROGRAMMERS** with **RSX11M**, **VMS** or **UNIX** experience, also those familiar with **MASCOT**. RTC has a proven track record in the areas of: **Process control**, **Telemetry**, **CAD/CAM**, **Modelling**, **Simulation**, **Weapons control**, **Radar & Sonar systems**, **Embedded software**, **LAN's**, **Communications** and **Operating Systems** support. We are also developing our own software in the field of **Office Automation**.

Due to increasing requirements from established clients (which include many of Europe's largest electronics companies) we wish to recruit both **Permanent** and **Freelance** staff to supplement existing teams.

Apart from those mentioned above we also need people for work on a wide variety of mini's and micro's using **Assemblers** plus the popular **High Level languages**.

e.g. HP, DEC, DG, GEC, Ferranti, Perkin Elmer, T1990, Z80, Intel 8085/6, M6800/6809, M68000, RTL/2, PASCAL, PL/1, PL/M, CORAL 66, 'C, ALGOL

CONTRACTS: £350-£900/wk.
IMMEDIATE STARTS
3 months to 3 years durations.
U.K., EUROPE and U.S.A.

PERMANENT: Salary £ neg + car + usual benefits. To join small but expanding team involved in both inhouse software development and consultancy services. The ideal candidate would be Midland-based (relocation considered) but willing to travel, with a broad experience of real time programming and/or design.

Do you have the skills and courage to 'RING THE CHANGES' for '83, by phoning RTC? NOW!!!

Ask for **JANET** (Birmingham) or **SUE** (Leeds).

RTC Head Office: Monaca House, Bristol Street, Birmingham B5 7AS
Tel: 021-622 6181
North: 51a St. Pauls Street, Leeds L1
Tel: 0532 431 522

CONTRACTS ASSIGNMENTS

OVERSEAS

VMEB, COBOL

VMEB, IDMS

PRIME, FORTRAN
PASCAL

PRIME, BASIC

Analysts - Kuwait
Programmers/Team Leaders - Kuwait
Support Programmers - Kuwait
Programmers - Brussels
Analyst Programmers - Brussels
Programmers - Brussels

ICL

VME, IBMS
ME29 TME COBOL
ME 29 TME TP
SYS 25
VME TPMS

All Levels
Programmer
Analyst Programmers
Designers
Designers

OTHER REQUIREMENTS

IBM

COBOL CICS, DLI
OS MVS COBOL
IMS DB DC COBOL
PLI, JSP + IMS DB
DLI CICS
OS/MVS

Programmer Analysts
Analyst Programmer
Analyst Programmer
Programmers
Systems Analyst
JCL Writers

HP 3000 COBOL
NCR IMOS COBOL
H66 DM4, D82
COBOL
OLIVETTI
ASSEMBLER
PASCAL, NETWORKS
GEOPHYSICAL,
FORTRAN
TELECOMS

Programmers
Programmers
Programmers
Analyst Programmers
Senior People
Programmers
Engineer

Ring Claire or Lynn of our Contracts Resources NOW!



357 Easton Road London NW1 3AL

01-388 2061 (24 Hours) Licence No. 521/1500

POLYTECHNIC OF THE SOUTH BANK
Borough Road, London SE1 0AA
DEPARTMENT OF MATHEMATICAL SCIENCES & COMPUTING
TEMPORARY ONE YEAR
LECTURER
GRADE II/
SENIOR
LECTURER
IN COMPUTING
(REF X-17)

Applications are invited for the above post. Appropriately qualified candidates offering any particular expertise within the broad area of computing will be considered, but a preference will be shown for candidates with a specialism in Programming Methodology. This post has arisen as the result of the secondment of members of the Department to specialist units within the Polytechnic - the Microcomputer Advisory Centre, and the Knowledge-Based Systems Centre. It is possible that the post may be renewable. Salary will be in the range: Lecturer, Grade II: £7,680 (X10) - £11,856 (p.a.)
Senior Lecturer: £11,007 (X8) - £13,850 (p.a.)
both scales inclusive of London Allowance.
It is hoped to appoint a suitable candidate to this post as soon as possible and so EARLY APPLICATION IS ADVISED. Further details of the Department and its activities together with an application form may be obtained from the Staffing Office 01-628 9859 Ext 2355. (1926)

FOR CLASSIFIED ADVERTISING USE
DIRECT LINES
RECRUITMENT CONSULTANCIES
(01) 661 8787
DIRECT ADVERTISERS
(01) 661 8080

Sales Executives

Currently Earning
£14,000 - £25,000

Michael Linford Associates wish to hear from Senior Sales Executives and Sales Managers whose track record to date has demonstrated superior ability.

We are an established consultancy who specialise in the search and selection of sales and marketing executives for the computer industry. Perhaps your current appointment is fulfilling your career needs, but nevertheless, you are interested in future opportunities, alternatively, you may be actively seeking a new appointment now.

You may be looking for:

- ★ A higher income
- ★ A more sophisticated product
- ★ A totally professional peer group
- ★ A more authoritative role

Or, more likely, a combination of all these factors, then perhaps its time you spoke to us. Bear in mind, the best position for you may never be advertised.

In the first instance, telephone **Steven Baker** on: 01-370 2012/2013. Or send a brief CV for his attention to the address below. Any approach will be treated in the strictest confidence.



Michael Linford Associates Ltd.
Executive Search Consultants

159A Gloucester Road, London SW7. Telephone: 01-370 2012/2013

COUNTY TREASURER'S DEPARTMENT POLICE COMPUTING

South Yorkshire Police are continuing to expand the use of computer facilities and a new team of civilian computer officers is to be appointed to assist the force with the management and use of computer systems. The team will be members of the County Treasurer's Staff but will be seconded full-time to the Police Headquarters, 51st Hill, Sheffield.

Applications for the following posts are invited from people of sound technical and practical experience and with the desire to help the police force undertake their many duties.

Computer Officer (Police Applications)

Salary up to £12,174 (Grade PO1C) Post Ref. T310

The Team Leader will liaise with a designated senior police officer to ensure that appropriate advice and support is provided. Applicants should be able to demonstrate sound management skills, wide technical experience and personal maturity. Experience of working in a disciplined environment or within the computer service industry may be an advantage.

Systems Analyst/Programmer

Salary up to £8,325 (Grade AP4/5) Post Ref. T312

To assist the Computer Officer in the development of applications and the maintenance/enhancement of existing dedicated systems. Experience of assembly language programming and knowledge of data general systems will be an advantage.

Computer Room Supervisor

Salary up to £8,325 (Grade AP4/5) Post Ref. T314

The successful applicant will be responsible for the planning, organisation and day-to-day control of computer equipment. Applicants should be able to demonstrate a sound practical experience of computer operational procedures and should be able to liaise with hardware servicing agencies, computer staff and end users.

Clerk Typist/Computer Terminal Operator

Salary up to £5,208 (Grade SO1/2) Post Ref. T315

Experience of using a full-Alpha keyboard and knowledge of filing systems is basic requisites for this post. The duties will involve control and maintenance of systems documentation. Please write or telephone for an application form, quoting the appropriate post reference to the Chief Executive (Personnel), South Yorkshire County Council, County Hall, Barnsley S70 2TN. Telephone: Barnsley (0228) 66141 ext 266. Closing date for applications: 1st January, 1983. South Yorkshire County Council is an equal opportunities employer.

South Yorkshire County Council

SETTING THE PACE



Sales Specialist Vertical Market

18K Gtee plus High Commission London & Home Counties

A major manufacturer is seeking to expand its sales team with the inclusion of a professional sales executive. You should be capable of developing a vertical market suitable to your own experience and expertise.

To succeed, and thereby earn well in excess of £20K, your experience should be of selling software in a commercial environment. Initial product training will take place in the States.

Ring Brian Mawdsley 01-734 7282 or via to Barnett Keel Ltd., 35 Piccadilly W1, quoting ref. 801. (1930)

Barnett Keel

SERVICE ENGINEERS

LONDON, H. COUNTIES, IRMINGHAM
MANCHESTER, SCOTLAND, BRISTOL

Unique opportunities exist for enthusiastic computer engineers with our British client - who enjoyed growth exceeding 50% on a £2m. last year - whose order book for 1983 guarantees rapid growth - who has opened six new offices in a period of 6 months - whose product range stretches from small business to graphics and microprocessor systems (and is still expanding) - whose expansion plans and staff development budget is huge!

NO other manufacturer can offer such career opportunities as our client, particularly in such numbers and locations with a view to reflect abilities, car, etc., and formal training in the new training org.

If you live in London, H. Counties, Birmingham, Scotland, Bristol or Manchester, call Keith Wells and capitalise on your superior experience NOW!!!

Further particulars may be obtained from the Recruiter and Secretary, University of Bristol Business School, 8th Floor, 111, St. James's Place, London W1P 8PS. (1930)

ALLTRONICS PEOPLE (A7)

01-543 4844/04865 3153 (egs.)

PERGAMON/IMT mean BUSINESS

Territory Manager

Location: St Albans

Hi-tech hardware/software multi-micro systems

On offer
• advancement to directorship with achievement
• competitive salary and top level commission
• company car
• hardware/software support
• green fields position

Required
• proven sales record in mini systems
• current commission scale earnings £18 000 +
• highly self motivated and extremely ambitious
• age 25 - 35
• degree level education

Senior Sales Consultant

Location: London (City)

DP consultancy services

On offer
• advancement to directorship with achievement
• competitive salary and top level commission
• company car
• proven expertise of consultants
• existing customers
• reference accounts
• large contact list

Required
• currently selling consultancy services to DP managers and financial directors
• proven success covering 3 years
• current earnings £20 000
• age 28 - 36
• ambitious: able to work without supervision
• man management aptitude
• degree level education

REAL SALES - REAL OPPORTUNITIES

Respond to David Hildyard, Managing Director, defining, in one page, how you meet the requirements, plus, a one page career and salary history.

National Mutual House, 88, London Road, St. Albans, Herts.

Member of the £200 million Pergamon Group of Companies. (1934)



COMPUTER SALES EXECUTIVES

£16,000 and EXCELLENT COMMISSION (UNLIMITED)
PLUS CAR AND OTHER BENEFITS

Our clients will be interested in talking with you if you have a successful sales record and a working knowledge of some of the following:

Minis/Mainframes
Distributive Processing Systems
Communications
OEM Sales
Word Processing

In return you will be offered the opportunity to use your professional skills in an exciting environment with unlimited earning potential. In the first instance telephone Camberley (0278) 32888 (office hours) or Farnborough (0252) 616978 to 10 p.m.



COMPUTER CONSUMER ADVICE BUREAU LTD.
Bureau Ltd.
Consultants
5 Green Lane, Blackwater
Near Camberley, Surrey (2011)

COMPUTER CENTRE

Applications are invited for the post of APPLICATIONS PROGRAMMER

within the Computer Centre. The successful candidate will be expected to advise users on the availability and use of National Institute facilities and to provide general advice on the use of an extremely diverse range of computer systems. Applicants will be expected to have a good degree in Mathematics and appropriate programming experience. Energy, enthusiasm and the ability to communicate with computer users are all essential for this post. The salary will be on the Grade 1 scale for Other Related Staff (Grade 1: £5,550 - £7,000 or Grade 1A: £6,375 - £7,125).

Further particulars may be obtained from the Recruiter and Secretary, University of Bristol Business School, 8th Floor, 111, St. James's Place, London W1P 8PS. (1930)

1983 (closed office reference only)

PERIPHERALS FROM PENNY & GILES

TECHNICAL SALES

COMPUTER PERIPHERALS

Penny & Giles require one more sales person to promote the sales of the company's range of computer peripherals equipment including VDU's, mag-tape stores, floppy disc stores, printers and associated electronic equipment. The person appointed will live in the Midlands or North have a sound technical knowledge relating to the computer industry and will preferably, but not necessarily, have previous sales experience. Salary is by negotiation plus a commission scheme and all the usual fringe benefits.

Apply in the first instance to: The Personnel Officer, Penny & Giles, Computer Peripherals, Christchurch, Dorset BH23 4AT. Tel: Christchurch (0202) 47781. (2004)

SALES BIT

Quality of Management - 35
An occasional success is better than a regular bore!

SALES meetings inevitably involve some routine matters that are rarely particularly exhilarating. The sales meeting is often a convenient occasion to distribute information to the salesforce, especially administrative matters - but such topics must be kept to an absolute minimum and free from individual personal or client issues unless they provide interesting examples from which everyone can learn. It is essential to ensure that the sales meeting is an entertaining and stimulating occasion from which all participants increase their knowledge and go away with their enthusiasm rekindled. This is not a easy to achieve. It is, therefore, better to have occasional but highly successful sales meetings than to have frequent uninspiring and apparently pointless gatherings.

Over the past two weeks I have presented some ideas for the kinds of events around which sales meetings can be built so as to provide a nucleus that is both informative and entertaining. Here are a few more ideas. It may sound dreadfully boring, but a presentation on the financial implications of purchasing can be both interesting and informative. It can also provide a powerful lever for increasing sales success. Without any doubt, you need a well-informed speaker who has real fluency in the topic. Whether he or she is from inside or outside the company is irrelevant.

The whole fabric of finance can be a fascinating topic if presented knowledgeably and enthusiastically - where money comes from, how it can be obtained, where it goes to, how it can be paid, the relevance of profitability and cash flow, the implications of getting it wrong, and so on. Then there is the more directly pertinent topic of purchase/lease/rent - which is the most appropriate.

A greater awareness of which method of financing is likely to be most appealing in a given company, economic climate or in the context of government legislation can give the salesperson an edge which could be the difference between winning and losing.

All the subjects I have mentioned up to now are in reality forms of sales training, albeit away from the mainstream of basic technique. It is therefore an obvious extension to introduce refresher sessions in basic selling techniques. In the past, I have worked for companies which would not dream of having a sales meeting without devoting some time to a chosen aspect of the selling process. And very valuable it was too, in both the short and long term. Okay, a large proportion of the meeting would remain at the prospect of being involved in a session of 'overcoming objections', but once things got underway (usually in the form of a role-play session with the participants selected well in advance) everyone appeared both to enjoy the action and appreciate its connotations. Such sessions need not dominate an entire meeting, they can easily fit around some other main event. Topics like "The do's and don'ts of telephone prospecting", "Pre-call preparation", "The structure of the sales letter", and so on, can be limited to just a few minutes.

On the other hand it may be appropriate to spend a significant amount of time on a particular subject if it is thought that a problem has been identified affecting the salesforce as a whole - like the introduction of a new product by the competition, or change in government legislation, failure to close a particular kind of business, and so on.

In such cases, role playing can be particularly valuable, especially if the participants are well chosen and well rehearsed. There are several approaches to this method of training. There is the normal role-play where one participant plays the part of the client and the other the salesman. This usually serves to highlight above all else the kinds of objections that might be presented and how they might be overcome. However, this is a medium which depends greatly upon spontaneity for its success and therefore can be based only on a structure rather than a script.

One alternative is to turn the role play into a comedy sketch by first doing a version in which the salesman deliberately does everything wrong, followed by another where he gets it right. This usually has the effect of getting all the important points across while providing some interesting entertainment. However, this can only be done effectively with the use of a pre-written script. In some circumstances a mime to an already recorded type of dialogue can be a more acceptable alternative to the nontheatrical.

The real value of role-playing, like most special events within the sales meeting, is the comment and questioning that must be encouraged afterwards.

Alan Williams

COURSES

■ AFAK Systems is holding a series of training courses in dBASE II for both beginners and experienced users.

It starts in February and costs £360 + VAT. The course lasts for three days and will be held in Bristol. Details (0272) 27285.

PUZZLE ANSWER

THE area of the farm is 43,560 acres, and the fence contains 43,560 rails. This figure also equals the number of square feet in a single acre.

Thursday, December 16/23, 1982

Europe's giants clinch R&D deal

by Philip Hunter

EUROPE'S two electronics giants, Dutch Philips and German Siemens, have joined forces in long-term information technology research and development.

The two companies spend a combined £1.5 billion a year on R&D. Their initial outlay in backing the EEC call for a \$400 million strategic plan, Esprit (European Community's Strategic Programme on Research and Information Technology), is \$3.7 million and 50 scientists.

A Philips spokesman said that closer co-operation could follow. Both companies stress that short-term product development - less than five years - is excluded from the current agreement and that the companies will remain rivals.

The deal is aimed specifically at products related to the computer industry, and includes semiconductors, microelectronics, computer-aided design and speech recognition.

This is the fourth in a series of joint deals that Philips has started this year. It has concluded a second source agreement with US micro maker Intel for its CMOS chip, with Intel to get consultancy advice from Philips on communications structures for its microcomputer.

The Dutch giant is holding talks with German electronics firm Grundig, in which it holds a 24.5% share.

The French State-owned company Thomson-Brandt is trying to

take over the remaining 73.5% of Grundig but is opposed by Philips. And Philips is currently talking to US telecommunications giant AT&T "about a new joint venture in the field of telecommunications," a Philips spokesman said.

Siemens said that its deal with Philips would have its quickest impact on its power engineering division which is developing micros for computer-aided design and manufacture, but that its data processing division, which makes the Siemens mainframe, would not be directly affected.

Philips expects the Siemens agreement to benefit future versions of its recently announced micro.



CURRYS - "400% leap took us by surprise," but "temporary shortages only, from week to week".

Santa is clean out of micros

by George Black

MANY who have been looking forward to a home computer as a Christmas present could be disappointed. For suppliers have seriously underestimated their appeal and now find themselves unable to keep up with the demand.

Philip Denyer, micro buyer for Laskys, said: "It is true that there is a general shortage right across the board. In particular there is a problem with getting the Atari 400 and the Commodore Vic 64 to meet customer demand."

"We expect to be about 500 short of each model round the whole country this Christmas."

Laskys stopped taking orders for the Vic 64 in early December because it knew it would not be able to deliver before the holiday. However, it was hoping to catch up with requests for the Atari by the middle of January and for the

Vic 64 by late February.

A spokesman for W. H. Smith reported a similar picture: "We aren't going to have enough Sinclair Spectrums and ZX81s to fulfil the requests from our branches."

Only 60 branches of Smith's stock the Spectrum anyway, he pointed out, but the ZX81 is normally available nationwide.

Nigel Searle, for Sinclair, said ZX81s were being manufactured at a rate of 10,000 a day and it was planned to boost production early in 1983 either at one of the two present plants or by starting a new one.

He thought there would be half a million Sinclair home computers in British homes by February. The addition of the new microdrive to the Spectrum in the first quarter of the year would help boost sales further still.

but he admitted: "There will be a shortfall, which we hope to catch up on soon after Christmas."

Atari's spokesman said: "The market is expanding very fast and there has been a very high demand for our computers. We are working flat out to supply all our outlets and sending out the machines as fast as we can."

At Curry's the story was of "temporary shortages only, from week to week", but the spokesman said that the company had been taken by surprise by the high level of demand in the shops. It had gone up by 400% in the previous month.

And even leaving Christmas out of the reckoning it appeared that demand was likely to be at a far higher level from now on. Lockages seemed to have occurred mostly at Customs, since most were being imported.

US firms back Ethernet standard

by Donald Kennett

THIRTEEN US companies have echoed the European Computer Manufacturers' Association initiative in June by endorsing the Ethernet local area network standard in its latest draft form.

In June, ECMA got 20 companies - many of them American - to back its version of Ethernet, even though another version was already being processed through the US Institute of Electrical and Electronic Engineers.

Since then the IEEE has worked closely with ECMA and Xerox, which originated the Ethernet system in the early 1970s, so that all three have agreed on the same version.

IEEE working group chairman Don Loughry of Hewlett-Packard said that all three parties had agreed to minor changes in their specifications, and the IEEE draft document now contained precise technical details which had only been described in general terms before.

An October meeting of the full IEEE 802 local area networks committee had given a 94% vote of approval to a draft, which had since been tidied up to remove inconsistencies, address the objections of the remaining 6% and make the details precise, he added.

The draft will now go through three levels of the IEEE hierarchy before it emerges fully rubber

stamped from the IEEE standards committee meeting in June or September. But the institute plans to make the revised documentation available after it is ratified by the computer communications technical committee in January.

ICL, which was a major backer of the ECMA agreement in June, welcomed the news from the US as a significant step towards Open Systems Interconnection at the link level.

Support was also gathering behind a draft proposal being put to the International Standards Organisation which described a protocol for the Transport Level of ISO's seven-level interconnection model, a spokesman said.

Sick pay revamp—to charge or not

by John Kavanagh

SHOP around for payroll packages: that is the message to users from the market as software houses and bureaux take different views on charging for the changes needed to handle new sick pay legislation.

The new rules put greater onus on employers to keep track of employees' sick days and work out how much sick pay should be paid. Users and package suppliers alike say the legislation means massive changes to payroll systems.

But the suppliers are split on whether to charge for the changes. Two of the leading package suppliers, MSA and PPL Cyborg,

say they are providing all the necessary upgrades at no charge as part of normal maintenance agreements.

But another, Peterborough Software, says many of the functions demanded by the new rules relate not to payroll but to personnel tasks - and it is charging for an "optional module" for its personnel system to handle those functions.

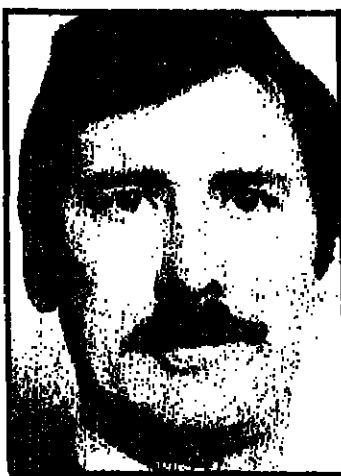
Bureaux, too, are split. Among the big names, Baric and Centrefile are making the changes free of charge, but CMG director Chris Harrison said the company was still considering its policy.

"These changes are statutory so it's not normal to charge for them," said MSA payroll product

manager Martin Fairbairn. "Every year we have changes to make, free of charge, to handle new tax rules and National Insurance contributions arising from the Budget. Users enter maintenance agreements with us to get these changes as a matter of course."

David Dryden, marketing and development manager at Peterborough, said, "We've discussed the legislation with the Department of Health and Social Security and agreed that 90% of it relates to personnel functions."

"These include the recording of days of absence, the storage of entitlement details and the calculation of the number of days payable."



FAIRBAIRN... No charge.

LINE NOISE

FOR those who have been keeping their fingers crossed for the sooner rather than later arrival of pukka IBM Personal Computers over here, the latest whisper is that IBM is to unveil the machine officially on January 18. But if it does not materialise then after all, do not lose hope. American giant General Electric, which sells the IBM PC as an intelligent terminal to its computers in the US, is planning to offer it in the UK soon, regardless of when IBM moves in.

THE Scottish company Future Technology Systems, which recently won a British Technology Group prize for its 16-bit distributed network computer based on 8086 and 8088 microprocessors, is poised to begin its export drive into Europe. An announcement about a major distributor is imminent.

ICL faces an intriguing choice of UK supplier if it is to move into the 16-bit microcomputer market. At present it sells - and builds - the Ralt machine as the ICL eight-bit personal computer. At the same time it buys 16-bit 2200 word processors from Logica VTS. But now Ralt has a sponsored 16-bit micro - just as Logica has dressed up the 2200 as a personal computer looking for dealers. To complicate things ICL has just given 2200 users the option of the CPM-66 operating system.

Computer financing
Standbrook House, 2-5 Old Bond Street, London W1X 3TB

AVAILABLE
3083 J 24
AUGUST 1983

TELEPHONE 01 409 2388 TELEX 8954724

CENTRONICS IBM Diabolivetti Hazeltine Texas Inst
Hazeltine Texas Instruments 301000 CENTRONICS
CENTRONICS IBM Diabolivetti Hazeltine Texas Inst
Hazeltine Texas Instruments 301000 CENTRONICS

TERMINAL CHOICE

EXECUTIVE 10

Green Phosphor
12" display, low-profile keyboard,
24 x 80 characters
with video attributes,
editing and line-drawing graphics.

£725

RAIR 01-836 6921
Upper St. Martin's Lane London WC2H 9EQ

